Reputation–Quality Mechanism in the Context of Mergers and Acquisitions: Financial Advisors, Financial Analysts and Acquirer Performance

XING, XIAOFEI

Durham University
Business School

Reputation–Quality Mechanism in the Context of Mergers and Acquisitions: Financial Advisors, Financial Analysts and Acquirer Performance

A thesis presented for the degree of
Doctor of Philosophy

Xiaofei Xing

Supervised by:

Dr Michael (Jie) Guo
Dr Li Ding

Durham University Business School
Durham University
September 2015

Abstract

This thesis focuses on the reputation–quality mechanism in the context of mergers and acquisitions (M&A). This study specifically examines whether investment bank reputation is a determinant of M&A advisory service quality, and whether sell-side analyst reputation is a determinant of the predictive ability of stock recommendations.

To begin with, this research investigates whether top-tier M&A financial advisors improve their acquirer clients' performance in both the short and long term, and whether top-tier advisors can help their acquirer clients to gain bargaining advantage, allowing them to pay lower bid premiums. I find that acquirers advised by top-tier advisors outperform in the long term and pay lower bid premiums, suggesting that top-tier advisors do have superior skills.

Furthermore, the social loafing hypothesis suggests that individuals exercise less effort when they work collectively. My research therefore explores whether multiple top-tier financial advisors can cooperate effectively to create value for their clients or whether they suffer from social loafing. This study finds that acquirers advised by multiple top-tier advisors gain greater long-term returns and pay lower bid premiums than acquirers advised by a single top-tier advisor. The results suggest that top-tier advisors care more about their reputational capital, and therefore do not suffer from social loafing. Instead, they can make concerted efforts to improve their clients' performance and bargaining power.

In addition, my study examines whether the pre-acquisition stock recommendations of sell-side analysts can be used to predict acquirer performance, and more importantly

whether the recommendations of star analysts have stronger predictive ability for acquirer announcement performance than those of non-star analysts. I find that pre-deal consensus recommendations are an effective predictor of acquirer performance; however, star recommendations are not predictive of acquirer performance, while acquirers with more favourable non-star consensus recommendations gain higher announcement returns. In other words, non-star recommendations have stronger predictive ability than star recommendations.

Overall, this thesis provides new evidence on the reputation–quality mechanism in the context of M&A. The results suggest that market share-based league tables are reliable to reflect financial advisors' skills, while sell-side analyst rankings are a kind of popularity contest.

Table of Contents

List of Tables

Declaration

No part of this thesis has been submitted elsewhere for any other degree or qualification in this or any other university. It is all my own work unless referenced to the contrary in the text.

Statement of Copyright

Acknowledgements

There are a number of people behind this piece of work who should be acknowledged and thanked. First, I would like to express my sincere thanks to my principle supervisor, Dr Michael Guo, for his guidance, encouragement and support throughout my PhD period. I began my PhD when I was thirty with many years of working experience. Michael is a supervisor who can accurately identify characteristics of different kinds of students, and encourage and help them to develop their full potential. From the very beginning of my PhD, Michael just set a goal for me to become a successful researcher, and motivated and supported me to achieve that goal. I not only completed the PhD thesis in the four years, but also engaged in many research projects with Michael, leading to successful publications. My PhD journey would not have been the same without his supervision. I also want to acknowledge Dr Li Ding for her comments and advice.

I am very grateful to Professor Qingwang Guo who encouraged me to pursue my PhD and introduced me to Michael. Without Qingwang, I would not have begun my PhD journey at Durham University.

I am greatly indebted to my grandfather, Songyi Xing, my parents, Xianli Xing and Weimin Sun, and my wife, Di Ai. My grandfather passed away during the third year of my PhD but he will always be in my heart and be the role model of my life. Without my parents' unconditional love and continued support, it would have been impossible for me to have achieved what I have so far. I have never met anyone who understands me and believes in me more than my wife. She is my soul mate. She makes me more than I am,

and I become a better man through her. I can hardly find words to describe how much you all, my family, mean to me and to express my deepest gratitude.

I would also like to thank Yichen Li. A PhD is a lonely journey. However, friendship can enrich daily life. Yichen, just like my younger brother, is my best friend in Durham and I really cherish our brotherhood.

I would also like to express my gratitude to Professor Changyun Wang, Professor Krishna Paudyal, Professor Dimitris Petmezas, and Professor John Doukas for their comments and advice on my research projects during my PhD.

To everyone else who is not mentioned above but supported me throughout my PhD, I thank you all.

In memory of my beloved grandparents

&

To my beloved parents and wife

Chapter 1 : Introduction

The reputation–quality mechanism of the product market has long been a point of interest for scholars and researchers (e.g. Nelson, 1970; Klein and Leffler, 1981; Shapiro, 1982; Rogerson, 1983; Shapiro, 1983; Allen, 1984; Maksimovic and Titman, 1991; Dawar and Parker, 1994; Landon and Smith, 1998; Jin and Kato, 2006; Caruana and Ewing, 2010; Dana Jr and Fong, 2011; Board and Meyer-ter-Vehn, 2013). Based on classical reputation theory, consumers use product price or producer reputation as an indicator of product quality when making purchasing decisions (Nelson, 1970; Shapiro, 1982; 1983). High-quality products attract more consumption through word-of-mouth advertising and repeat purchase (Rogerson, 1983), whereas consumers will react negatively to businesses' attempts to provide low-quality products (Allen, 1984). Producers' efforts to establish their reputation will be rewarded with a price premium and long-term profitability (Klein and Leffler, 1981). At the same time, price premiums encourage producers to maintain and improve product quality (Shapiro, 1983). As a consequence, quality and reputation could constitute a positive feedback loop that enhances consumers' loyalty (Caruana and Ewing, 2010).

Given the classical reputation theory, this thesis focuses on the reputation–quality mechanism in the context of mergers and acquisitions. Investment banks play a pivotal role in mergers and acquisitions. In this thesis, two divisions of investment banks are analysed – investment banking and securities research.

Initially, this thesis examines the relationship between bank reputation and quality of M&A advisory service. Prestigious banks dominate the investment banking industry.

Specifically, more than half M&A advisory services are provided by the top 10 banks.[1] Top-tier investment banks charge premium advisory fees and are supposed to provide high-quality service, thereby improving their clients' bargaining power and takeover performance. Nonetheless, the empirical evidence on this reputation–quality mechanism is mixed. The effects of top-tier financial advisors on value creation have been questioned by scholars. Top-tier advisors receive a larger proportion of incentive fees that are contingent on deal completion (Rau, 2000). Even if an M&A deal will destroy shareholder value, incentive fees stimulate top-tier advisors to complete such deals, and top-tier advisors have greater skills in completing them compared to non-top-tier advisors. As a result, the majority of studies in this area challenge the effectiveness of the market share-based league table, since top-tier advisors do not outperform non-top-tier advisors and may even underperform in terms of M&A advisory service quality (Bowers and Miller, 1990; Michel, Shaked and Lee, 1991; McLaughlin, 1992; Servaes and Zenner, 1996; Rau, 2000; Hunter and Jagtiani, 2003; da Silva Rosa *et al.*, 2004; Walter, Yawson and Yeung, 2008; Chahine and Ismail, 2009; Schiereck, Sigl-Grüb and Unverhau, 2009; Ismail, 2010).

Meanwhile, other empirical studies suggest that prestigious banks have greater skill in identifying profitable targets to yield synergies and improve bargaining power to guarantee their clients a greater share of any potential synergy gains (Kale, Kini and Ryan, 2003; Golubov, Petmezas and Travlos, 2012). In addition, having a higher reputation than their competitors helps prestigious banks to obtain a greater market share. There is therefore strong motivation for top-tier advisors to maintain their reputation through providing a high-quality advisory service. As a consequence, acquirers benefit from the retention of top-tier advisors, and gain a superior performance in acquisitions.

[1] Data Source: Thomson One Banker.

Although the investment bank reputation–quality mechanism has been widely discussed, most studies explore whether top-tier advisors improve acquirer announcement performance, while only a few have examined the effects of the retention of top-tier advisors on acquirer long-term performance. In fact, financial advisors engage in not only deal negotiation but also post-deal integration. If the synergies identified and secured by top-tier advisors exist, then it will take time to transfer them into improved performance through post-deal integration and to demonstrate them to the market. In other words, the positive effects of top-tier advisors should be reflected in the long term rather than the short term. Therefore, Chapter 2 investigates whether top-tier advisors create value for their acquirer clients in both the short and long term through examining a sample of 3,103 completed M&A deals in the US over the period 1990–2009. In this thesis, top-tier financial advisors are defined as the top 10 investment banks listed in the market share-based league table. As a consequence, Chapter 2 finds that acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors in the long term, whereas there is an insignificant difference in the announcement performance of acquirers advised by top-tier advisors compared to those advised by non-top-tier advisors. These results confirm the conjecture that top-tier advisors help their acquirer clients create synergies, and the synergies will be materialized in the long term.

In addition, the previous literature has not distinguished between the effects of single top-tier advisors and multiple top-tier advisors. This thesis is also interested in whether top-tier financial advisors can cooperate effectively to improve their clients' performance or suffer from social loafing. Social loafing refers to people's tendency to make less effort when they work collectively, leading to underperformance. However, social loafing can be alleviated by some factors, such as work complexity (Jackson and Williams, 1985) and social identity (Karau and Williams, 1993). In other words, complex tasks and a concern

for reputation motivate individuals to enhance their performance. More reputable advisors acquire a greater market share in the investment banking industry. Prestigious banks should therefore care more about their reputational capital. It is plausible that multiple top-tier financial advisors cooperate effectively to prevent social loafing that may destroy their reputation. As a consequence, Chapter 2 finds that acquirers advised by multiple top-tier financial advisors outperform acquirers advised by a single top-tier advisor, suggesting that multiple top-tier advisors do not suffer from social loafing; instead, the collective work of top-tier advisors leads to outperformance. In addition, the number of top-tier advisors retained is positively related to acquirer long-term performance, whereas the number of total advisors retained is negatively related to acquirer long-term performance. This direct comparison highlights top-tier advisors' superior skills and concern for their reputation.

Chapter 3 further examines whether the retention of top-tier advisors influences takeover premiums. On one hand, since the contingent fee structure encourages top-tier advisors to complete deals (McLaughlin, 1990; Rau, 2000), they may ask their acquirer clients to pay a higher bid premium to achieve transaction agreement. One the other hand, if top-tier advisors have strong deal negotiation techniques, they should be able to help their acquirer clients obtain a bargaining advantage to minimize bid premiums. Even though the relationship between bank reputation and acquirer performance has been discussed in detail, only a small number of those studies have investigated the effects of bank reputation on bid premiums. To clarify this issue, Chapter 3 analyses a sample of 3,430 completed US M&A deals during 1990–2012, and find that acquirers pay significantly lower bid premiums in deals advised by top-tier advisors than in deals advised by non-top-tier advisors. In other words, acquirers advised by top-tier advisors gain a

bargaining advantage in the negotiation process and therefore pay lower bid premiums, implying top-tier advisors' superior deal negotiation skills.

Chapter 3 is also interested in the performance of multiple top-tier advisors in deal negotiation. If multiple top-tier advisors suffer from social loafing, their acquirer clients will not gain a bargaining advantage and may even overpay in deals advised by multiple top-tier advisors. However, Chapter 3 finds that acquirers advised by multiple top-tier advisors pay significantly lower bid premiums than those advised by a single top-tier advisor, suggesting that multiple top-tier advisors can effectively cooperate to improve their clients' bargaining power.

Although top-tier advisors help to reduce transaction costs, they charge premium advisory fees. Hence, there is concern about whether the benefits of savings in bid premiums outweigh the disadvantage of high advisory fees. In particular, the concern of overpayment will be more severe when multiple top-tier advisors are retained. To resolve this concern, Chapter 3 defines cost reduction as the sum of the reduction in the cost of bid premiums and acquirer total advisory fees. As a result, Chapter 3 finds that acquirers advised by top-tier advisors have significantly lower costs than those advised by non-top-tier advisors, and the cost reduction effects are even more significant in deals involving multiple top-tier advisors. In other words, top-tier advisors contribute significantly to cost reductions, and therefore concern about overpayment is unnecessary.

This thesis has also investigated in-house deals, although in-house deals only account for less than 8% of the sample. Chapter 2 suggests that in-house deals do not create value for acquirers, and Chapter 3 finds that acquirers sometimes pay higher bid premiums in in-house deals.

In addition, Chapter 4 examines the reputation–quality mechanism in another division of investment banks – securities research teams. Unlike previous studies that examine financial analyst behaviour around mergers and acquisitions, and focus more on analyst conflicts of interest, (e.g. Bradley, Morgan and Wolf, 2007; Kolasinski and Kothari, 2008; Haushalter and Lowry, 2011; Sibilkov, Straska and Waller, 2013; Becher, Cohn and Juergens, 2014; Tehranian, Zhao and Zhu, 2014), Chapter 4 explores whether sell-side analysts' stock recommendations can be used to predict acquirer announcement performance, and more importantly investigates the relationship between analyst reputation and recommendation predictive ability for acquirer performance.

Previous literature suggests that market misvaluation drives mergers and acquisitions (Shleifer and Vishny, 2003). Specifically, overvalued firms are more likely to become acquirers, and use their overvalued stocks to purchase undervalued firms. However, overvalued acquirers tend to underperform around takeover announcements (Dong *et al.*, 2006). In addition, well-managed firms with growth opportunities are more likely to become value-enhancing acquirers (Lang, Stulz and Walkling, 1989; Servaes, 1991). Therefore, if analyst stock recommendations appropriately reflect firm valuation and growth prospects, pre-deal recommendations should be predictive of acquirer announcement performance. Specifically, acquirers with favourable pre-deal recommendations should outperform acquirers with unfavourable pre-deal recommendations, since analysts issue favourable recommendations for undervalued firms with growth prospects and unfavourable recommendations for overvalued firms without growth prospect. At the same time, some scholars suggest that star analysts can make more accurate earnings forecasts and more profitable stock recommendations than non-star analysts (Stickel, 1992; Desai, Liang and Singh, 2000; Leone and Wu, 2007;

Fang and Yasuda, 2009; Loh and Stulz, 2011; Fang and Yasuda, 2014), whereas many others argue that star analysts do not outperform non-star analysts, and star analyst elections are a kind of popularity contest where performance is not the key determinant of the rankings (Gleason and Lee, 2003; Emery and Li, 2009). Therefore, Chapter 4 is also interested in whether stock recommendations made by more reputable analysts have stronger predictive ability for acquirer performance.

To verify these predictions, Chapter 4 examines a sample of 10,169 M&A deals in the US made by acquirers with stock recommendations during 1996–2010, and define star analysts as analysts elected as members of the All-America Research Team (including first, second, third, and runner-up teams) by *Institutional Investor* magazine. Chapter 4, consequently, finds that more favourable pre-deal consensus recommendations are associated with higher acquirer announcement returns, suggesting that analyst stock recommendations are predictive for acquirer takeover performance. However, more reputable analysts do not provide more informative recommendations, and even underperform in terms of recommendation profitability. Specifically, no significant relationship is found between star pre-deal recommendations and acquirer announcement returns, whereas acquirers with more favourable non-star recommendations perform better around announcement. In other words, non-star recommendations have stronger predictive ability than star recommendations, which is consistent with the nature of a popularity contest.

Overall, this thesis suggests that more reputable financial advisors can provide a higher quality M&A advisory service, improving acquirer performance and bargaining power. However, more reputable sell-side analysts do not provide more predictive recommendations for acquirer performance.

This thesis contributes to the M&A literature in the following aspects. First, this research adds new evidence on the inconclusive results regarding the reputation–quality mechanism for investment banking service. Unlike the previous literature, which has concentrated on the effects of investment banks' effects on acquirer short-term performance, Chapter 2 highlights that merger synergies identified and secured by top-tier banks should be materialised in the long term and finally perceived by the market. Therefore, the effects of top-tier advisors on acquirer performance should be observed in the long term rather than in the short term. In addition, Chapter 3 is also interested in the impact of top-tier advisors on bid premiums that have not been comprehensively discussed. Ultimately, this study suggests that top-tier advisors can help their acquirer clients improve their long-term performance and bargaining power, supporting the reliability of market share-based league tables.

Second, the existing literature does not distinguish between the effects of multiple top-tier advisors and single top-tier advisor. Given the tendency for social loafing, it is necessary to investigate whether multiple top-tier advisors can effectively cooperate to improve M&A advisory service quality. This study suggests that multiple top-tier advisors care more about their reputational capital and therefore do not suffer from social loafing. Instead, they make concerted efforts to enhance their clients' performance and bargaining power.

Third, Chapters 2 and 3 also have important implications for practitioners. Based on the statistical evidence, these two chapters suggest that acquirers do not necessarily need to worry too much about the premium advisory fees charged by top-tier advisors. Although the market may consider such premium advisory fees as overpayment that will engender

negative market reactions in the short term, the retention of top-tier advisors improves acquirer long-term performance and bargaining power, and contributes to total cost reduction. The benefits of retaining top-tier advisors outweigh the disadvantages. Market share-based league tables are therefore shown to be an effective reference point when making advisor retention decisions.

Fourth, this study examines the links between analyst stock recommendations and takeover performance. Unlike previous studies that explore whether analysts forecast takeovers, this study explores whether pre-deal stock recommendations are an effective predictor of acquirer performance. The previous literature suggests that stock price movements can be driven by analyst recommendation revisions (changes in recommendations) rather than recommendations themselves (Womack, 1996; Loh and Stulz, 2011). Therefore, this study can distinguish acquirer announcement effects from analyst revision effects, through analysing the level of recommendations. This study finds that analyst pre-deal recommendations have predictive ability for acquirer performance, whether analysts are able to predict acquisitions or not.

Fifth, Chapter 4 provides new evidence regarding the sell-side analyst reputation–quality mechanism. This chapter finds non-star recommendations to be a strong predictor of acquirer performance, whereas star recommendations do not have predictive ability. The underperformance of star analysts reflects the nature of popularity contest.

Sixth, Chapter 4 has practical implications for investors. Even though the existing literature suggests that star analyst revisions are more influential to drive stock price drift (Stickel, 1992; Loh and Stulz, 2011), investors would be better to follow non-star analysts'

consensus recommendations to make predictions on acquirer announcement performance, and therefore make more profitable investment decisions.

The remainder of this thesis is organised as follows. Chapter 2 investigates the impacts of investment bank reputation on acquirer short- and long-term performance. Chapter 3 explores the relationship between bank reputation and bid premiums. Chapter 4 examines the predictive ability of sell-side analyst stock recommendations for acquirer performance, and compares star and non-star recommendations. Chapter 5 draws the conclusions of the study, discussing the main findings, implications, limitations and future research.

Chapter 2 : Financial Advisor Reputation and M&A Returns

2.1. Introduction

This chapter investigates whether the retention of top-tier financial advisors, ranked by market share, leads to better merger and acquisition (M&A) performance of acquirers in both the short and long term. This chapter is also interested in whether multiple top-tier advisors can make concerted efforts to help their acquirer clients improve performance or suffer from social loafing.

For US mergers and acquisitions where investment banks are involved, more than half of all deals are advised by the top 10 banks.[2] Prestigious banks play a pivotal role in the investment banking industry. They charge much higher advisory fees and are supposed to provide their clients with a superior service (Golubov, Petmezas and Travlos, 2012). However, the empirical evidence on this reputation–quality mechanism remains inconclusive. Incentive fees contingent on deal completion stimulate advisors to complete deals rather than chase performance (McLaughlin, 1990; Rau, 2000). Compared with non-top-tier advisors, top-tier advisors receive a larger portion of contingent fees (Rau, 2000). Additionally, top-tier advisors have a stronger ability to complete deals, even if the deals are value-destroying (Rau, 2000; Hunter and Jagtiani, 2003). Consequently, the majority of studies find that acquirers advised by top-tier advisors do not outperform acquirers advised by non-top-tier advisors and may even obtain lower abnormal returns, challenging the effectiveness of the market share-based league table (Bowers and Miller, 1990; Michel, Shaked and Lee, 1991; McLaughlin, 1992; Servaes and Zenner, 1996; Rau,

[2] Data Source: Thomson One Banker.

2000; Hunter and Jagtiani, 2003; da Silva Rosa *et al.*, 2004; Walter, Yawson and Yeung, 2008; Chahine and Ismail, 2009; Schiereck, Sigl-Grüb and Unverhau, 2009; Ismail, 2010).

In contrast, other studies argue that top-tier advisors are capable of improving acquirer performance, since top-tier advisors have a superior ability to identify synergistic targets and secure a larger proportion of synergies for their clients (Kale, Kini and Ryan, 2003; Golubov, Petmezas and Travlos, 2012). Additionally, a higher reputation is associated with a higher market share. To maintain this market share, top-tier advisors must therefore maintain their reputation, which is achieved by providing a superior service.

Even though the investment bank reputation–quality mechanism has been discussed in detail, only a few studies investigate whether prestigious advisors create value for their clients in the long term. Most research (Bowers and Miller, 1990; Michel, Shaked and Lee, 1991; McLaughlin, 1992; Servaes and Zenner, 1996; Kale, Kini and Ryan, 2003; da Silva Rosa *et al.*, 2004; Chahine and Ismail, 2009; Schiereck, Sigl-Grüb and Unverhau, 2009; Ismail, 2010; Bao and Edmans, 2011; Golubov, Petmezas and Travlos, 2012) only focuses on the effect of financial advisors on acquirer performance around announcement. Indeed, some advisors provide their service until transactions are closed while others engage in post-deal integration (Marks *et al.*, 2012: pp. 123-130). More importantly, deal completion is not the end but the new beginning for acquirers, since integration of the combined entities is of paramount importance to achieve synergies (Sudarsanam, 2010: pp. 695-764; Marks *et al.*, 2012: pp. 123-130). If the synergies identified and secured by top-tier advisors exist, then it will take time to transfer a potential synergy into improved performance through post-deal integration, and eventually being perceived by the market. Therefore, it is essential to examine the relation between the choice of advisors and acquirers' long-term performance. In the literature, Walter, Yawson and Yeung (2008) explore whether acquirer post-announcement

long-term abnormal returns are determined by advisors' reputations. However, their research estimates long-term performance only over the [0, 270] event window after announcements. Generally, 270 days are not long enough for synergies to be materialised. Furthermore, momentum or momentum reversal are typical within 12-month periods (Jegadeesh and Titman, 1993), which could heavily affect stock returns. Two- or three-year returns are more common and reliable measures for long-term performance. Rau (2000) also investigates how bank reputations influence acquirers' long-term abnormal returns; he does not find significant relations. However, Rau only controls for deal characteristics but does not control for acquirer characteristics. The literature shows that acquisition performance is determined by firm characteristics, such as size (Moeller, Schlingemann and Stulz, 2004), market-to-book (Dong *et al.*, 2006), leverage (Maloney, McCormick and Mitchell, 1993), free cash flows (Harford, 1999) and so forth. In addition, Ismail (2010) finds that the effects of top-tier advisors differ across "bull" and "bear" markets. In other words, market characteristics should also be controlled for.

Furthermore, to the best of the author's knowledge, there is no research that distinguishes between deals advised by a single top-tier advisor and multiple top-tier advisors. If multiple top-tier advisors can cooperate effectively, they can greatly improve their clients' performance. In contrast, social loafing refers to the tendency of people to make less effort when they work collectively, leading to poor performance. In addition, top-tier advisors charge premium advisory fees. The retention of multiple top-tier advisors will increase concern about overpayment, leading to more negative market reactions. Therefore, whether the benefits of the retention of multiple top-tier advisors outweigh the disadvantages needs further research. Additionally, although Hunter and Jagtiani (2003) have examined whether increasing the total number of acquirer advisors affects acquirer gains. They find that a larger number of advisors retained associates with greater gains for

acquirers, although it is still unknown whether the result is driven by the number of top-tier advisors retained by acquirers.

Motivated by the above-mentioned unresolved issues, this chapter examines the effect of top-tier financial advisors on acquirer performance in both the short and long term via analysing a sample of 3103 completed US M&A deals over the period 1990–2009. In this study, top-tier financial advisors are defined as the top 10 investment banks listed in the market share-based league table. Acquirer short- and long-term performances are measured by five-day market-adjusted cumulative abnormal returns around announcement (CAR [-2, 2]) and post-announcement 36-month size-adjusted buy-and hold abnormal returns (BHAR36), respectively. In the regression analysis, firm, deal and market characteristics are controlled for. Consequently, this chapter finds that the retention of top-tier advisors does not have significant effects on acquirer short-term performance, regardless of whether a single or multiple top-tier advisors are retained. In private acquisitions, advisor reputation is even negatively related to acquirer announcement abnormal returns. Private acquisitions are much less complex that public acquisitions. The results indicate that investors regard the retention of top-tier advisors in private acquisitions as unnecessary and overpaid, leading to negative market reactions. In contrast, top-tier advisors significantly improve their acquirer clients' performance in the long term. The positive effects of top-tier advisors on acquirer long-term performance hold for public and private acquisition sub-samples. On average, acquirers advised by top-tier advisors outperform other acquirers by 13.90%, after controlling for firm, deal, and market characteristics. More interestingly, an increase in the number of top-tier advisors retained by acquirers is positively related to acquirer long-term performance, whereas increasing the total number of advisors has negative effects on acquirer long-term performance. The direct comparison between the coefficients on the number of top-tier advisors and the total

number of advisors highlights top-tier advisors' superior skills in improving their clients' long-term performance. These empirical results strongly support the conjecture that top-tier advisors' ability to identify synergistic targets and secure a larger proportion of synergy will be reflected in acquirer long-term performance rather than acquirer short-term performance.

Finally, this chapter also addresses the issue of endogeneity by conducting instrumental variable (IV) regressions. Although the results are not qualitatively changed, endogeneity leads to undervaluation of top-tier advisors' effects. Compared to acquirers advised by non-top-tier advisors, the retention of top-tier advisors improves acquirer long-term performance by 47.15%, after controlling for endogeneity.

This research contributes to the M&A literature in the following aspects. First, this chapter sheds new light on puzzling empirical evidence on the financial advisor reputation–quality mechanism. Unlike most papers that only focus on financial advisors' effects in the short term, this chapter argues that merger synergies identified and secured by prestigious advisors should be realized in the long term and eventually perceived by the market. By simultaneously examining acquirer performance in both the short and long term, this chapter provides novel evidence on the impact of top-tier advisors on acquirer performance. This study highlights that top-tier advisors' effects on acquirer performance are shown in the long term rather than in the short term. The retention of top-tier advisors significantly improves acquirer long-term performance, suggesting that the market share-based league tables are reliable to reflect advisors' skills.

Second, the existing literature does not distinguish acquirers advised by multiple top-tier advisors from acquirers advised by a single top-tier advisor. By investigating the effects of multiple top-tier advisors, this chapter suggests that an increase in top-tier advisors

retained does not result in more severe conflicts of interest; whereas multiple top-tier advisors can effectively cooperate, thereby making concerted efforts to improve their clients' performance.

Third, this chapter also has important implications for practitioners. This chapter suggests that acquirers do not need to worry too much about overpayment of advisory fees. Such overpayment engenders a negative market reaction in the short term. However, top-tier advisors can help their clients outperform in the long term. The benefits of retaining top-tier advisors outweigh the disadvantages.

The remainder of this chapter is organised as follows. Section 2 reviews the literature. Section 3 constructs the main hypotheses. Section 4 presents the data selection procedure and methodology. Section 5 discusses the empirical results and shows robustness tests. Section 6 concludes.

2.2. Literature Review

The role of financial advisors has been highlighted by an increasing number of researchers. This school of literature mainly concentrates in examining the reputation–quality mechanism. In general, advisors' reputations are measured by market share-based league tables. The majority of existing studies question the effects of prestigious advisors on their acquirer clients' performance to a greater or lesser extent. For example, Bowers and Miller (1990) examine whether top-tier advisors improve the combined acquirer and target announcement abnormal returns, and whether top-tier advisors can help their clients gain a larger proportion of total wealth, through analysing 114 US completed acquisitions during 1981–1986. Their results show that deals with top-tier advisors retained by either

acquirers or targets generate higher returns to combined firms than deals without top-tier advisor involvement. However, top-tier advisor involvement does not create a higher proportion of total returns to acquirers, but positively relates to targets' proportion of total returns. In other words, top-tier advisors do not help acquirers gain bargaining advantage. Since acquirers aim to profit from acquisitions rather than transfer wealth to targets, the above results cannot demonstrate that acquirers that retain top-tier advisors make superior deals.

McLaughlin (1990) explores advisory fee structure in 195 US tender offers from 1978 to 1985 and show that more than 80% of the fees are contingent on the completion of deals. In other words, investment banks have a strong incentive to complete transactions. Through further research on an acquirer sample of 227 tender offers and a target sample of 148 tender offers during 1978–1986, McLaughlin (1992) finds that completion rates do not differ across acquirers advised by high-, median- and low-reputation advisors; however, acquirers advised by high-reputation advisors gain significantly lower announcement returns and pay more bid premiums than acquirers advised by low-reputation advisors. Advisory fees are mainly determined by the transaction value.

Michel, Shaked and Lee (1991) investigate the relation between advisor prestige and takeover performance via examining announcement abnormal returns for 81 acquirers and 122 targets during 1981–1987. These acquirers were advised by six major investment banks (Goldman Sachs, Morgan Stanley, First Boston, Lehman Brothers, Salomon Brothers and Drexel Burnham Lambert) and a group of other banks. Lower target announcement abnormal returns imply lower bid premiums paid by acquirers. In terms of maximizing acquirer abnormal returns but minimizing target abnormal returns, Drexel Burnham Lambert, one of the less prestigious banks, obtains the best performance;

whereas First Boston, a Bulge Bracket member, underperforms all of the other advisors. These results suggest that bank reputations do not positively relate to acquirer performance.

Servaes and Zenner (1996) evaluate the determinants of financial advisor choice and the effects of financial advisors on acquirer announcement performance, by analysing 99 in-house deals and 198 deals advised by investment banks completed from 1981 to 1992. They find that acquirers tend to retain advisors rather than conduct in-house deals, and tend to retain top-tier advisors rather than non-top-tier advisors, when the complexity of deals is greater, when acquirers are less experienced, and when deals are takeovers rather than acquisitions of assets. In addition, acquirer announcement returns do not significantly differ across in-house deals and deals advised by investment banks. The difference in announcement returns between acquirers advised by top-tier and non-top-tier banks is also insignificant.

Rau (2000) examines the relations between financial advisor market share, contingent fee payments and acquirer performance via analysing 372 mergers advised by 125 banks and 388 tender offers advised by 66 banks over the period 1980–1991. He finds that contingent fee structure differs across advisor groups classified by investment bank market shares. Specifically, first-tier banks charge a larger portion of contingent fees compared to second- and third-tier banks. Regardless of deal types – mergers or tender offers – investment bank market share is determined by the deal completion rates, but is not determined by the acquirers' post-deal performance. Compared with second- and third-tier advisors, top-tier advisors have similar deal completion rates in mergers, but higher deal completion rates in tender offers. Compared with acquirers advised by non-top-tier investment banks, acquirers advised by top-tier banks obtain lower announcement

abnormal returns in mergers but higher announcement abnormal returns in tender offers. However, acquirers advised by top-tier banks do not make a greater percentage of value-increasing transactions than value-decreasing transactions either in mergers or tender offers. Compared to top-tier and second-tier advisors, third-tier advisors help their clients pay the lowest bid premiums in tender offers whereas acquirers advised by different groups of advisors pay similar premiums in mergers. The effects of advisor contingent fees on acquirer post-deal long-term performance are insignificant in mergers but significantly negative in tender offers. Overall, the results of Rau (2000) indicate that top-tier advisors have higher deal completion rates but do not help their clients improve acquisition performance.

Hunter and Jagtiani (2003) investigate whether the choice of financial advisors affects M&A deal completion rates, the speed of completion and acquirer post-deal gains by analysing 5337 US mergers from 1995–2000. They find that the top-tier advisors increase the probability of deal completion and take less time to complete deals compared to non-top-tier advisors. Advisory fees are not related to the probability of deal completion, whereas total fees and the proportion of contingent fees are positively related to the speed of completion. By employing the difference between the transaction value at the announcement date and the effective date as the proxy of acquirer post-deal gains, they find that acquirer performance is negatively related to the retention of top-tier advisors but positively related to total advisory fees and the number of advisors retained by acquirers.

Based on the research of 801 Australian acquisitions announced over the period 1989–1998, da Silva Rosa *et al.* (2004) find that acquirers advised by second-tier advisors gain higher abnormal returns around announcement and obtain a larger portion of synergies than first- and third-tier advisors. Furthermore, second-tier advisors have lower deal

completion rates and also make fewer value-destroying deals than first-tier advisors. Advisor market share is determined by the last year market share but is not associated with advisor deal completion rates and takeover performance.

Walter, Yawson and Yeung (2008) analyse US M&A deals from 1980–2003 and find that high quality investment banks measured by market share do not improve their clients' acquisition performance, even though they charge significantly higher advisory fees. In addition, prestigious banks do not have higher deal completion rates; however, they can shorten the time to resolution.

Based on the research of 635 US completed acquisitions during 1985–2004, Chahine and Ismail (2009) find that advisor reputations are positively related to advisory fees, and acquirer advisory fees are negatively related to bid premiums. However, there is no significant relation between advisor reputations and bid premiums. Furthermore, advisor reputations do not have significant effects on the probability that acquirers gain more than targets, where acquirer and target gains are measured by abnormal returns and bid premiums, respectively.

By examining 285 European M&A deals over the period 1997–2002, Schiereck, Sigl-Grüb and Unverhau (2009) find that there is no significant relation between announcement returns to combined firms and the retention of top-tier advisors, whether top-tier advisors are retained by acquirers or targets. In addition, acquirers (targets) advised by top-tier advisors do not outperform acquirers (targets) advised by non-top-tier advisors, indicating that top-tier advisors do not bring bargaining advantage to their clients.

Based on the study of 6379 US acquisitions completed during 1985–2004, Ismail (2010) documents more than $42 billion of losses for acquirers advised by tier-one advisors and $13.5 billion of gains for acquirers advised by non-top-tier advisors over the five-day period around announcement. In addition, Ismail (2010) finds that over the internet bubble period, acquirers advised by top-tier advisors also gain positive abnormal returns, and outperform acquirers advised by non-top-tier advisors. Furthermore, he points out that most value-destroying deals are made in "bear" markets. If deals made in "bear" markets were removed from the sample, top-tier advisors could help their acquirer clients gain more announcement returns compared to non-top-tier advisors. However, for the entire sample, less prestigious advisors will have a higher ranking if the ranking is based on the acquirer announcement performance.

In contrast, some scholars hold the opposite point of view. Their results indicate that high quality banks improve their clients' acquisition performance. For example, Kale, Kini and Ryan (2003) show a positive relation between advisors' reputations and their acquirer clients' performance through analysing 390 US acquisitions announced during 1981–1994. More specifically, in their research, the acquirer advisor market share relative to the target advisor market share is used as the proxy for the acquirer advisor relative reputation. They find that relative reputations for acquirer advisors are positively related to total returns to combined firms, acquirer returns and acquirer shares of total returns, but are negatively related to target returns. Furthermore, advisors with higher relative reputations are more capable of completing deals and preventing value-decreasing deals.

By examining 308 takeovers, including 145 auction deals and 163 negotiation deals, during 1989–1999, Boone and Mulherin (2008) find that acquirer announcement returns are positively related to top-tier advisors retained by acquirers but negatively related to

top-tier advisors retained by targets. Therefore, top-tier advisors help their acquirer clients improve acquisition performance, and help their target clients gain high-premium offers. In other words, the retention of top-tier advisors is in the interest of employers.

Based on the research of 15344 US acquisitions over the period 1980–2007, Bao and Edmans (2011) suggest that the investment bank fixed effects on announcement returns to acquirers are statistically significant, after controlling for acquirer characteristics. Furthermore, in terms of improving acquirer announcement returns, investment banks that gain better past performance will also achieve better performance in the future. In other words, investment banks' performances of M&A advisory services are persistent. Therefore, bank quality is positively related to acquirer announcement performance, if the bank quality is measured by past performance instead of market shares.

Golubov, Petmezas and Travlos (2012) analyse 4803 attempted takeover transactions announced during 1996–2009 in the US, and find that acquirers advised by top-tier advisors outperform acquirers advised by non–top-tier advisors in public acquisitions. On average, the retention of top-tier advisors leads to $65.83 million of shareholder gains for acquirers in public acquisitions. In private and subsidiary acquisitions, top-tier advisors do not improve acquirer announcement performance. More importantly, their results suggest that the improvement in performance can be attributed to top-tier advisors' skills in identifying synergistic targets and negotiating higher shares of synergies for acquirers. Furthermore, top-tier financial advisors tend to charge higher advisory fees. Top-tier advisors do not associate with higher deal completion rates. In other words, top-tier financial advisors are not simply retained to complete the transactions. However, they are able to complete the deals in a shorter period of time. Additionally, acquirers with in-house M&A expertise are less likely to employ advisors in acquisitions.

In addition to aforementioned studies that focus on the reputation–quality mechanism, some researchers investigate M&A financial advisors from different perspectives. For example, Allen *et al.* (2004) explore the effects of commercial banks that play the role of both lenders and merger advisors. They find that targets that retain their own commercial banks as merger advisors outperform targets that retain investment banks; whereas acquirers do not gain higher abnormal returns when their own commercial banks are retained as acquisition advisors. Bodnaruk, Massa and Simonov (2009) examine the role of financial advisors as insiders of targets. They find that acquirer financial advisors may exploit the advantages of privileged information to hold a stake in the targets, thereby profiting from arbitrage strategy. Such an advisory stake is associated with a higher probability of deal completion and a higher target premium but hurts acquirer profitability. Kisgen, Qian and Song (2009) examine the effects of fairness opinions provided by investment banks on takeover performance, and find that acquirers that use fairness opinions underperform other acquirers around announcement. Their results suggest that investors question the profitability of these deals with fairness opinions. Song, Wei and Zhou (2013) compare boutique advisors and full-service banks. They find that boutique advisors tend to be retained in deals with greater complexity, and they can help acquirers pay lower bid premiums, showing their superior skills.

2.3. Hypotheses

Most studies show the negative relationship between acquirer announcement returns and the retention of top-tier financial advisors, since the high advisory fees paid will increase acquirers' costs, leading to negative market reactions. Therefore, this chapter formulates the following hypothesis:

H1: The retention of top-tier advisors by acquirers is negatively related to acquirer short-term performance.

Furthermore, since top-tier advisors charge premium advisory fees, the retention of multiple top-tier advisors will increase concern about overpayment, leading to more negative market reactions in the short term.

H2: The number of top-tier advisors retained by acquirers is negatively related to acquirer short-term performance.

However, top-tier advisors' abilities to identify synergistic targets and gain barraging advantage in negotiations have been emphasized by Golubov, Petmezas and Travlos (2012). This chapter argues that if the synergy identified by top-tier advisors does exist, then it will take time to transfer the potential synergy into improved performance through post-deal integration before eventually being perceived by the market. Furthermore, post-deal integration plays the pivotal role in value creation. Although some financial advisors will end their services after deal completion, others will continue to support their clients in the process of post-acquisition integration (Marks *et al.*, 2012: pp. 123-130). Therefore, the positive effects of top-tier advisors on acquirer's performance should be shown in the long term rather than in the short term. As a consequence, this chapter establishes the following hypothesis:

H3: The retention of top-tier advisors by acquirers is positively related to acquirer long-term performance.

Additionally, social loafing refers to the phenomenon that group members make less effort when they work collectively than when they work individually. However, Jackson and Williams (1985) argue that collective work on simple tasks results in social loafing,

whereas cooperation on complex tasks enhances performance. Additionally, Karau and Williams (1993) point out that social loafing can be alleviated by several factors, such as evaluation of individual work, participants' expectations of co-workers' efforts, intrinsic value of task, and culture. Mergers and acquisitions, as important investment projects for companies, are difficult tasks. Top-tier advisors have a higher cost of reputation. Specifically, a higher reputation is associated with a higher market share. To maintain this market share, top-tier advisors must therefore maintain their reputation, which is achieved by providing high-quality service. However, if multiple top-tier advisors exert less effort in deal advisory services, their reputation will be destroyed. Therefore, if top-tier advisors have superior skills and multiple top-tier advisors can cooperate effectively, they can greatly improve their clients' performance. Consequently, this chapter formulates the following hypotheses:

H4: The number of top-tier advisors retained by acquirers is positively related to acquirer long-term performance.

2.4. Data and Methodology

2.4.1. Sample Selection

This chapter analyses a sample of US domestic M&As announced over the period 1st January 1990 to 31 December 2009 from Thomson One Banker. The original sample includes 178,861 deals. Since this research pays attention to both the short- and long-term performance of acquisitions, deal status is required to be completed or unconditional, which leads to a sample of 139,196 deals. Acquirers are required to be public and targets are required to be public, private, or subsidiaries. Using these criteria yields a sample of 67,071 deals. Takeover transaction values are required to be greater than or equal to $1 million, yielding a sample of 35,272 deals. Regulated industries such as financial and

utility firms (Standard Industrial Classification (SIC) codes 6000–6999 and 4900–4999, respectively) are excluded, yielding a sample of 25,095 deals. Bankruptcy acquisitions, going-private transactions, leveraged buyouts, liquidations, repurchases, restructurings, reverse takeovers, and privatizations are excluded from the sample, leaving a panel of 22,692 observations. Since this chapter focuses on the effects of financial advisors, acquirers are required to have their advisor information recorded by Thomson One Banker, yielding 5826 deals. To control for deal characteristics, observations are required to report transaction value and payment method information to Thomson One Banker, which leaves a sample of 5076 deals. To calculate short- and long-term abnormal returns, acquirers are required to file sufficient stock price data with the Center for Research in Security Prices (CRSP) database, which leaves a sample of 4347 deals.[3] To measure firm characteristics, acquirers are required to have sufficient accounting data in the Compustat database, yielding a final sample of 3103 deals. In the final sample, 3003 transactions are advised by investment banks, while 100 transactions are in-house deals (recorded as "no investment bank retained" by Thomson One Banker).

2.4.2. Methodology

2.4.2.1. Measure of Advisor Reputation

Following the method of Golubov, Petmezas and Travlos (2012), this research uses a binary classification to distinguish between top-tier and non–top-tier advisors. Specifically, the top 10 banks measured by transaction value are classified as top-tier advisors and the others are classified as non-top-tier advisors.[4] Since the eighth and tenth advisors are very

[3] Calculating size-adjusted BHARs also requires data on the book value of equity from the Compustat database.

[4] Appendix 2.1 shows the top 25 investment banks ranked by transaction value. Financial advisor league tables were downloaded from Thomson One Banker. The ranking list for the 1990s and 2000s are presented in Panel A and B, respectively.

similar in transaction values and market shares, this chapter uses the top 10 as the cut-off point, unlike the top-eight classification used by Golubov, Petmezas and Travlos (2012). The top-10 cut-off point is also used by Ismail (2010).

To prevent misclassification, this chapter also pays attention to takeovers among investment banks. For instance, Lehman Brothers declared bankruptcy in 2008 and was acquired by Barclays Capital the same year. Therefore, deals advised by Barclays Capital before the acquisition of Lehman Brothers are classified as being advised by a non-top-tier investment bank, whereas deals advised by Barclays Capital after the acquisition are classified as advised by a top-tier bank. Similarly, First Boston was acquired by Credit Suisse in 1990. Travelers Group acquired Salomon Brothers (top-tier) in 1998 and subsequently merged with Citicorp the same year, establishing Citigroup.

2.4.2.2. Measure of Performance

2.4.2.2.1 Short-Term Performance

Bouwman, Fuller and Nain (2009) argue that the presence of frequent acquirers in the sample will bias market model parameter estimations. In line with these authors, this chapter uses market-adjusted cumulative abnormal returns (CARs) to measure acquirer short-term performance. Market-adjusted abnormal returns are defined as follows:

$$AR_{it} = R_{it} - R_{mt}$$

where R_{it} is the daily stock return for firm i on date t and R_{mt} is the daily return for the value-weighted CRSP index on date t. Subsequently, market-adjusted CARs are calculated over a [-2, 2] window around announcements (CAR [-2, 2]), as follows:

$$CAR_{i,T_1,T_2} = \sum_{t=T_1}^{T_2} AR_{it}$$

Conventional t-statistic (Gosset, 1908) is used and calculated as follows:

$$t = \frac{\overline{CAR} \times \sqrt{n}}{\sigma(CAR)}$$

where $\overline{CAR}$ is the sample mean, *σ(CAR)* is the sample standard deviation, and n is the sample size.

2.4.2.2.2. Long-Term Performance

Test statistics of long-term market-adjusted abnormal returns are misspecified due to rebalancing bias, new-listing bias, and skewness bias (Barber and Lyon, 1997; Lyon, Barber and Tsai, 1999). To address these problems, Lyon, Barber and Tsai (1999) and Bouwman, Fuller and Nain (2009) use size-adjusted buy-and-hold abnormal returns (BHARs) to measure long-term stock performance and calculate bootstrapped skewness-adjusted t-statistic. Therefore, this chapter estimates long-term performance following Lyon, Barber and Tsai (1999) and Bouwman, Fuller and Nain (2009). Specifically, post-announcement 36-month size-adjusted BHARs (BHAR36) are calculated as follows:

$$BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2}(1 + R_{it}) - \prod_{t=T_1}^{T_2}(1 + R_{pt})$$

where R_{it} is the monthly stock return for firm *i* in month *t* and R_{pt} is the monthly return for reference portfolio in month *t*, calculated as

$$R_{pt} = \frac{1}{N}\sum_{j=1}^{N} R_{jt}$$

with R_{jt} the monthly stock return for firm *j* in month *t* and *N* the number of firms.

In each year, this chapter constructs 50 reference portfolios in terms of size and market-to-book. The reference portfolios are created in two stages, following Bouwman, Fuller, and Nain (2009). First, from 1990 to 2009, all NYSE firms are sorted into deciles

on the basis of their market value, calculated as the stock price multiplied by the number of common shares outstanding in June of year *t*. Second, within each size decile, firms are sorted into quintiles based on their market-to-book ratios, calculated as the market value of equity in June of year *t* divided by the book value of equity in fiscal year *t* - 1. After all NYSE firms are categorized into 50 groups, AMEX and NASDAQ firms are placed in their proper reference portfolios based on market value and market-to-book ratios. Additionally, firms that conducted acquisitions in year *t* are excluded from the reference portfolios.

Although size and market-to-book reference portfolios are used to adjust for the performance, long-term BHARs still tend to be positively skewed (Lyon, Barber and Tsai 1999). Therefore, Lyon, Barber and Tsai (1999) develop the bootstrapped skewness-adjusted t-statistic. It is measured following a two-step procedure. First, skewness-adjusted t-statistics is calculated based on Johnson (1978) as follows:

$$t = \sqrt{n}\left(\frac{\overline{BHAR}}{\sigma(BHAR)} + \frac{1}{3}\frac{\sum_{i=1}^{n}\left(BHAR_i - \overline{BHAR}\right)^3}{n\sigma(BHAR)^3}\left(\frac{\overline{BHAR}}{\sigma(BHAR)}\right)^2 + \frac{1}{6n}\frac{\sum_{i=1}^{n}\left(BHAR_i - \overline{BHAR}\right)^3}{n\sigma(BHAR)^3}\right)$$

where $\overline{BHAR}$ is the sample mean, *σ(BHAR)* is the sample standard deviation, and n is the sample size. The second step is bootstrapping the skewness-adjusted test statistic. This chapter draws 2000 bootstrapped resamples of BHARs and calculate the skewness-adjusted t-statistic.

2.4.2.3. Regression Analysis

2.4.2.3.1. Short- and Long-Term Performance

The variation in acquirer abnormal returns can be explained by multiple variables. Since univariate tests do not consider the interaction of alternative variables, the results may be unreliable. Therefore, multivariate regressions are necessary. Since Golubov, Petmezas and Travlos (2012) have emphasized that top-tier advisors' effects on acquirer performance differ across public, private and subsidiary acquisitions, this chapter also divides the entire sample into sub-samples and conducts regressions for the entire sample and each sub-sample. The following ordinary least-squares (OLS) regressions are conducted to examine the relation between acquirer abnormal returns and financial advisors:

Short-term performance:

$$CAR_i = \alpha_0 + \alpha_1 TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + \alpha_6 Market_i + f_t + f_{ind.} + \varepsilon_i$$

$$CAR_i = \alpha_0 + \alpha_1 No.of\ \ TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + \alpha_6 Market_i + f_t + f_{ind.} + \varepsilon_i$$

Long-term Performance:

$$BHAR_i = \alpha_0 + \alpha_1 TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + \alpha_6 Market_i + f_t + f_{ind.} + \varepsilon_i$$

$$BHAR_i = \alpha_0 + \alpha_1 No.of\ \ TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + \alpha_6 Market_i + f_t + f_{ind.} + \varepsilon_i$$

where *TopTier*$_i$ and *No. of TopTier*$_i$ are the key explanatory variables in this research. *TopTier*$_i$, a dummy variable, is used to examine the overall effects of top-tier advisors. In addition to existing literature, this chapter use *No. of TopTier*$_i$, a count-data variable, to evaluate the effects of the retention of multiple top-tier advisors. *TopTier*$_i$ equals one if acquirer *i* retains at least one top-tier advisor for the deal, and zero otherwise. *No. of TopTier*$_i$ equals the number of top-tier advisors retained by the acquirer *i* for the deal.

Furthermore, *No. of Advisors*$_i$ equals the total number of advisors retained by the acquirer *i* for the deal. *InHouse*$_i$ equals one if acquirer *i* does not retain any financial advisors for the deal, and zero otherwise. Additionally, this chapter includes a series of control variables that impact acquirer returns. Specifically, *Firm*$_i$ represents the firm characteristics of acquirer *i* at the end of fiscal year prior to the announcement, *Deal*$_i$ represents the deal characteristics for acquirer *i*, and *Market*$_i$ represents market characteristics for acquirer *i*. The explicit description of firm, deal and market characteristics will be shown later in this section. This research also controls for year fixed effects (f_t) and industry fixed effects ($f_{ind.}$). To minimize the influence of outliers, all continuous variables are winsorized at 1% and 99%.[5]

2.4.2.3.2. Determinants of Decisions on Making In-House Deals or Retaining Top-Tier Advisors

This chapter is also interested in exploring what kind of firms in what kind of situation are more likely to retain top-tier financial advisors or to conduct in-house deals. Since retaining top-tier advisors and conducting in-house deals are negatively correlated, it is appropriate to use a bivariate probit model to jointly estimate the probabilities of these two decisions.[6] The bivariate probit model is shown as follows:

$$\begin{cases} Prob(InHouse_i) = \alpha_0 + \alpha_1 Firm_i + \alpha_2 Deal_i + \alpha_3 Market_i + f_t + f_{ind.} + \varepsilon_i \\ Prob(TopTier_i) = \beta_0 + \beta_1 Firm_i + \beta_2 Deal_i + \beta_3 Market_i + f_t + f_{ind} + \epsilon_i \end{cases}$$

2.4.2.3.3. Endogeneity

The reliability of OLS regression is based on the fundamental assumption that the model error term does not correlate to the regressors. In other words, the explanatory variable

[5] Results hold when the variables are winsorized at different levels, such as 2% and 98%, 3% and 97%, and 5% and 95%.

[6] For robustness check, this chapter also separately estimates the probability of retaining top-tier advisors and the probability of making in-house deals by conducting two individual probit models.

should be exogenously determined. However, as pointed out by Golubov, Petmezas and Travlos (2012), significant difference in firm and deal characteristics between acquirers advised by top-tier and non-top-tier investment banks indicate that an top-tier advisor dummy could be an endogenous regressor. Instrumental variable (IV) regression is a leading approach to address the issue of endogeneity (Cameron and Trivedi, 2010: p. 177). Therefore, this chapter applies two-stage least squares regression (2SLS) – a kind of IV regression. The two main explanatory variables, *TopTier* and *Number of TopTier*, are binary and count-data variables, respectively. When the dependent variable is a dummy, probit or logit tend to be used. When the dependent variable is a count-data variable, the Poisson model tends to be used. However, for 2SLS, using non-linear models like probit or logit in the first stage with a dummy endogenous variable is unnecessary. Even if the endogenous regressor is a binary or a count-data variable, using OLS for the first-stage regression creates consistent results for the IV model (Angrist and Krueger, 2001).

An appropriate instrument variable should be correlated with the endogenous variable, but does not directly related to the dependent variable. Following Fang (2005) and Golubov, Petmezas and Travlos (2012), this chapter constructs the instrument variable *Scope*. *Scope* measures the scope of investment banking services provided by top-tier advisors that is used by an acquirer before the given M&A deal. This chapter constructs *Scope* based on M&A deals, equity issues and bond issues data from Thomson One Banker. Specifically, *Scope* equals three if an acquirer retained top-tier advisors for all the three types of transactions (M&A, equity issue and bond issue) during the five-year period prior to the acquisition. *Scope* equals two if an acquirer retained top-tier advisors for two of the three types of transactions during the five-year period prior to the acquisition. *Scope* equals one if an acquirer retained top-tier advisors for only one of the three types of transactions during the five-year period prior to the acquisition. *Scope* equals zero if an acquirer never

retains top-tier advisors during the five-year period prior to the acquisition. In addition, this study uses Stock and Yogo (2005) weak instrument tests to examine whether the instrument variable *Scope* is valid. The results suggest that the variable *Scope* is not a weak instrument.

This chapter constructs following 2SLS regressions to examine the effects of top-tier advisors on acquirer short- and long-term performance:

Short-term Performance:

$$\begin{cases} TopTier_i = \alpha_0 + \alpha_1 Scope_i + \alpha_2 Firm_i + \alpha_3 Deal_i + \alpha_4 Market_i + f_t + f_{ind.} + \varepsilon_i \\ CAR_i = \beta_0 + \beta_1 \widehat{TopTier}_i + \beta_2 Firm_i + \beta_3 Deal_i + \beta_4 Market_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

$$\begin{cases} No.of\ \ TopTier_i = \alpha_0 + \alpha_1 Scope_i + \alpha_2 Firm_i + \alpha_3 Deal_i + \alpha_4 Market_i + f_t + f_{ind.} + \varepsilon_i \\ CAR_i = \beta_0 + \beta_1 \widehat{No.of\ \ TopTier}_i + \beta_2 Firm_i + \beta_3 Deal_i + \beta_4 Market_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

Long-term performance:

$$\begin{cases} TopTier_i = \alpha_0 + \alpha_1 Scope_i + \alpha_2 Firm_i + \alpha_3 Deal_i + \alpha_4 Market_i + f_t + f_{ind.} + \varepsilon_i \\ BHAR_i = \beta_0 + \beta_1 \widehat{TopTier}_i + \beta_2 Firm_i + \beta_3 Deal_i + \beta_4 Market_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

$$\begin{cases} No.of\ \ TopTier_i = \alpha_0 + \alpha_1 Scope_i + \alpha_2 Firm_i + \alpha_3 Deal_i + \alpha_4 Market_i + f_t + f_{ind.} + \varepsilon_i \\ BHAR_i = \beta_0 + \beta_1 \widehat{No.of\ \ TopTier}_i + \beta_2 Firm_i + \beta_3 Deal_i + \beta_4 Market_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

In the above 2SLS regressions, the first stage is the regression of *TopTier* or *Number of TopTier* on the instrument variable *Scope*, and firm, deal, and market characteristics. The second stage is the regression of acquirer performance (CAR or BHAR) on model-estimated $\widehat{TopTier}$ or $\widehat{No.of\ \ TopTier}$ from first stage, controlling for firm, deal and market characteristics.

2.4.2.3.4. Control Variables: Firm, Deal and Market Characteristics

The control variables in this chapter include firm, deal and market characteristics.[7] For firm characteristics ($Firm_i$), this chapter controls for size (*Ln(MV)*), market-to-book ratio (*M/B*), leverage (*Leverage*), cash flow-to-equity ratio (*Cash flows/Equity*), pre-deal stock performance (*RUNUP*), and acquirer takeover experience (*Past Experienced*).

Moeller, Schlingemann and Stulz (2004) investigate size effects in M&A performance and find that acquirer announcement returns negatively associate with firm size. To control for size effects, this chapter calculates the logarithm of the acquirer market value (*Ln(MV)*) measured four weeks before the announcement (CRSP item PRC×SHROUT).

Lang, Stulz and Walkling (1989) and Servaes (1991) study the relation between Tobin's Q and takeover returns. They find that takeovers by high Q acquirers for low Q targets generate the largest announcement returns to acquirers. In contrast, Rau and Vermaelen (1998) examine the post-merger long-run performance of glamour (high market-to-book) and value (low market-to-book) acquirers and find that glamour acquirers underperform in the long run. Additionally, Dong *et al.* (2006) find that high market-to-book acquirers gain lower announcement returns in general. This chapter calculates *M/B* as market value of equity four weeks before the announcement (CRSP item PRC×SHROUT) divided by book value of equity at the fiscal year end before the announcement (Compustat item CEQ).

Maloney, McCormick and Mitchell (1993) investigate the relation between capital structure and M&A returns. They find that acquirers with higher leverage gain higher announcement returns and argue that debt helps to alleviate agency problem and therefore improve the quality

[7] All the control variables mentioned in this section are described in Appendix 2.2, where Panels A to C present firm characteristics, deal characteristics, and market characteristics, respectively.

of M&A decision-making. This chapter calculates *Leverage* as total debt over total capital at the fiscal year end before the announcement (Compustat item (DTLL+DLC)/(DLTT+DLC+SEQ)).

Harford (1999) examines whether excess cash holdings stimulate top management to conduct takeover transactions, and whether these deals (made by cash-rich acquirers) tend to be value-destroying. They find that cash-richness is significantly positively related to the probability of being a acquirer, but is negatively related to acquirer announcement returns. Moreover, post-merger long-run abnormal operating performance for cash-rich acquirers is significantly negative. This chapter calculates *Cash Flows/Equity* as cash flows at the fiscal year end before the announcement (Compustat item IB+DP-DVP-DVC) divided by market value of equity four weeks before the announcement (CRSP item PRC×SHROUT).

Morck, Shleifer and Vishny (1990) use stock price runup as the measure of acquirer pre-deal performance and find that acquirer runup is positively related to acquirer announcement returns. In contrast, Rosen (2006) finds that acquirer runup is negatively related to both short- and long-term abnormal returns for acquirers. This chapter calculates *RUNUP* as acquirer market-adjusted CARs before announcement date over the [-365, -28] window.

Ismail (2008) finds that multiple acquirers underperform and argues that acquirers who have successful experience tend to be overconfident in subsequent deals. This chapter defines *Past Experience* as the number of deals made by an acquirer over the five-year period before the acquisition in question.

For deal characteristics ($Deal_i$), this chapter controls for relative transaction values (*Relative Size*), acquirer public status (*Public*), payment method (*Cash/Stock*), deal attitude (*Hostile*), bid competition (*Competing Bid*), tender offers (*Tender offer*), and diversifying deals (*Diversification*).

Fuller, Netter and Stegemoller (2002) find that acquisitions of larger targets generate higher returns to acquirers. This chapter calculates *Relative Size* as the transaction value (from Thomson One Banker) divided by the acquirer market value of equity four weeks before the announcement (CRSP item PRC×SHROUT).

Chang (1998) and Fuller, Netter and Stegemoller (2002) show that acquirers gain higher return in private acquisitions than in public acquisitions. This chapter uses the *Public* dummy to identify the listing status of the target. *Public* equals one if the target is a publicly listed firm.

Overvalued acquirers tend to use stock as payment method (Shleifer and Vishny, 2003). Loughran and Vijh (1997) show that deals paid by cash generate more returns to acquirers in the long term than deals paid by stock. This chapter uses two dummies, *Stock* and *Cash*, to control for payment methods. *Stock* (*Cash*) equals one if the deal is 100% paid by stock (cash).

Schwert (2000) points out that hostile takeovers are strategically employed by acquirers or targets to maximize their gains. In addition, his study shows that hostility identified by pre-bid events is negatively related to acquirer returns, although most hostile deals covered by media do not significantly differ from friendly deals in terms of stock returns. In this chapter, the *Hostile*

dummy equals one if the deal attitude is identified as hostile or unsolicited by Thomson One Banker.

De, Fedenia and Triantis (1996) examine competitive acquisitions and indicate negative effects of bid competition on acquirer returns. This chapter uses *Competing Bid* to control for takeover contest. *Competing Bid* equals one if there are more than one bidding firms reported by Thomson One Banker.

Loughran and Vijh (1997) show that tender offer positively relates to acquirer long-term returns. In this chapter, the *Tender Offer* dummy equals one if the deal is identified as a tender offer by Thomson One Banker.

Numerous studies show that diversification results in value reduction (Lang and Stulz, 1994; Berger and Ofek, 1995), however a certain amount of research challenges this notion (Villalonga, 2004; Shahrur and Venkateswaran, 2009). In this chapter, the *Diversification* dummy equals one if the acquirer and the target do not share the same first two digits of primary SIC code.

For market characteristics ($Market_i$), this chapter controls for M&A market heat (*M&A Heat Degree*) and stock market valuation (*High/Low Valuation Market*).

In contrast to the literature on the driving force of merger waves, Duchin and Schmidt (2013) investigate whether deals in merger waves are value-enhancing. Their study shows that in-wave acquirers significantly underperform in the long term. To measure the intensity of M&A activities, this chapter creates the variable *M&A Heat Degree* following the method of Yung, Çolak and Wei (2008). Specifically, *M&A Heat Degree* is calculated

as the moving average[8] of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985.

Shleifer and Vishny (2003) and Rhodes-Kropf and Viswanathan (2004) believe that stock market misvaluation drives merger activities and finally influences acquirer returns. Bouwman, Fuller and Nain (2009) examine the difference in acquirer performance between acquisitions in "bull" and "bear" markets. They find that acquirers in high-valuation markets outperform in the short term but underperform in the long term compared to acquirers in low-valuation markets. To measure stock market valuation, this chapter follows the method of Bouwman, Fuller and Nain (2009). Specifically, this chapter initially detrends the monthly P/E ratio of the S&P 500[9] from 1985 to 2009. Subsequently, each month is classified as below or above average base on whether the detrended P/E ratio of the month is lower or higher than the past five-year average. Finally, the lowest 50% of below average months are identified as *Low Valuation Market*, while the highest 50% of above average months are identified as *High Valuation Market*.

2.5. Results

2.5.1. Summary Statistics and Univariate Test

2.5.1.1. Entire Sample

Table 2.1 exhibits summary statistics for the entire sample and the univariate comparison between deals advised by investment banks and in-house deals. In the sample, 96.78% of

[8] Moving average MA(4) is calculated as the average of the number of M&A deals in each quarter and three previous quarters.

[9] The monthly P/E ratio of the S&P 500 is acquired from the Datastream.

deals are advised by investment banks, while in-house deals account for only 3.32% of the sample.

[Insert Table 2.1 here]

Panel A of Table 2.1 shows both short- and long-term abnormal returns for acquirers. For the full sample, acquirers' CAR [-2, 2] and BHAR36 average 1.28% (p=0.000) and -33.01% (p=0.000), respectively. The median value of acquirers' CAR [-2, 2] and BHAR36 are 0.68% (p=0.000) and -44.58% (p=0.000), respectively. The differences in acquirer short- and long-term performance between deals advised by banks and in-house deals are insignificant. It is not surprising that acquirers gain negative abnormal returns in the long term, since the results are consistent with the previous literature (e.g. Loughran and Vijh, 1997; Rau and Vermaelen, 1998; Sudarsanam and Mahate, 2003; Conn et al., 2005; Cosh, Guest and Hughes, 2006; Bouwman, Fuller and Nain, 2009). Shleifer and Vishny (2003) suggest that mergers and acquisitions are driven by market misvaluation. Overvalued companies are more likely to conduct takeovers to acquire undervalued companies. Overvalued companies tend to underperform over the long term, whereas acquisitions can create synergies. Therefore, acquirers' long-term performance would be worse without takeovers (Shleifer and Vishny, 2003).

Panel B of Table 2.1 presents firm characteristics of acquirers. The mean (median) acquirer market value for the full sample is $9236.24 million ($1018.32 million). Acquirers who retain advisors are significantly smaller in size than acquirers who conduct in-house deals. The mean (median) market-to-book ratio for acquirers in the full sample is 5.91 (3.06). Acquirers who retain advisors have a significantly lower market-to-book ratio than acquirers who conduct in-house deals. The mean (median) leverage for acquirers in the full sample is 0.26 (0.25). The difference in leverage between acquirers who retain

advisors and acquirers who conduct in-house deals is insignificant. The mean (median) cash flows-to-equity for acquirers in the full sample is 0.04 (0.05). In terms of cash flows-to-equity, the difference between acquirers who retain advisors and acquirers who conduct in-house deals is insignificant. The mean (median) stock price runup for acquirers in the full sample is 20.07% (12.67%). Acquirers who retain advisors and acquirers who conduct in-house deals have similar pre-deal stock performance. For the full sample, acquirers made 7.27 M&A deals over the five-year period prior to acquisition on average. Acquirers who retain advisors have significantly less acquisition experience than acquirers who conduct in-house deals.

Panel C of Table 2.1 shows the deal characteristics. The mean (median) transaction value for the full sample is $880.92 million ($158.50 million). The value of deals advised by banks is significantly greater than the value of in-house deals. The difference in transaction value averages $470.92 million. The mean (median) relative size for the full sample is 0.34 (0.16). The relative size of deal advised by banks is significantly larger than the relative size of in-house deals. Public, private and subsidiary acquisitions account for 46.79%, 31.71% and 21.50% of the sample, respectively. Acquirers advised by banks constitute a significantly less percentage of public acquisitions but a higher percentage of private and subsidiary acquisitions than acquirers who conduct in-house deals. All-stock deals, all-cash deals and mixed paid deals occupy 27.30%, 36.06% and 36.64% of the sample, respectively. Acquirers advised by banks make significantly less all-stock deals, but more all-cash and mixed paid deals than acquirers who conduct in-house deals. Only 1.06% of the deals in the sample are hostile deals. Acquirers advised by banks make significantly more hostile deals than acquirers who conduct in-house deals. Competing bids only account for 2.06% of the sample. In terms of competing bids, the difference between acquirers advised by advisors and acquirers who conduct in-house deals is

insignificant. Tender offers occupy 15.98% of the sample. Acquirers advised by banks make significantly fewer tender offers than acquirers who conduct in-house deals.

Panel D of Table 2.1 presents market characteristics. The mean (median) M&A heat degree for the full sample is 1.48 (1.44). The M&A heat degree is significantly negatively related to the retention of advisors, indicating that acquirers in a relatively cold M&A market tend to choose advisors. In the full sample, 27.94% (24.85%) of deals are made in a high (low) valuation market. 26.84% of deals advised by banks are conducted in a high valuation market, whereas 61.00% of in-house deals are conducted in a high valuation market. The difference between deals advised by banks and in-house deals is significant. Additionally, 25.57% of deals advised by banks are conducted in a high valuation market, whereas only 3.00% of in-house deals are conducted in a high valuation market. The difference between deals advised by banks and in-house deals is significant. These results indicate that acquirers tend to conduct in-house deals in a "bull" market rather than a "bear" market.

Panel E of Table 2.1 shows financial advisor related information for deals advised by banks. Acquirers retain 1.14 advisors for a deal on average. The mean and median total advisory fees paid for one deal is $4.15 million and $1.58 million, respectively.

Overall, Table 2.1 shows that acquirers who retain advisors and acquirers who conduct in-house deals gain similar performance in both the short and long term. In other words, in-house expertise does not outperform advisors. Additionally, larger acquirers, more glamour acquirers, and more experienced acquirers tend to conduct in-house deals. Furthermore, firms tend to conduct in-house deals, when the transaction value and relative size of the deal are smaller, when the M&A market is hot, and when the stock market

valuation is high. In-house deals are also associated with more public acquisitions and all-stock deals.

2.5.1.2. Sub-Sample of Deals Advised by Advisors

Table 2.2 exhibits summary statistics for the sub-sample of deals advised by investment banks and the univariate comparison between deals advised by top-tier and non-top-tier advisors. In deals with advisor involvement, 50.52% and 49.48% of deals are advised by top-tier and non-top-tier advisors, respectively. In other words, top-tier advisors control more than 50% of market share of the M&A advisory industry.

[Insert Table 2.2 here]

Panel A of Table 2.2 shows acquirer short- and long-term abnormal returns for the sub-sample of deals with advisor involvement. The mean and median CAR [-2, 2] for acquirers advised by top-tier advisors are 0.76% (p=0.004) and 0.53% (p=0.001), respectively; while the mean and median CAR [-2, 2] for acquirers advised by non-top-tier advisors are 1.78% (p=0.000) and 1.06% (p=0.000), respectively. Acquirers advised by top-tier advisors underperform acquirers advised by non-top-tier advisors by 1.01% (p=0.012) on average. Furthermore, the mean and median BHAR36 for acquirers advised by top-tier advisors are -25.96% (p=0.000) and -37.31% (p=0.000), respectively; while the mean and median BHAR36 for acquirers advised by non-top-tier advisors are -39.95% (p=0.048) and -53.25% (p=0.000), respectively. Acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors by 13.99% (p=0.000) on average.

Panel B of Table 2.2 presents acquirer characteristics for the sub-sample of deals advised by banks. The mean (median) market value for acquirers advised by top-tier and

non-top-tier advisors are $13419.07 million ($2504.71 million) and $2773.46 million ($399.57 million), respectively. Acquirers who retain top-tier advisors are significantly larger in size than acquirers who retain non-top-tier advisors. The mean (median) market-to-book for acquirers advised by top-tier advisors is 6.40 (3.15), while the mean (median) market-to-book for acquirers advised by non-top-tier advisors is 5.22 (2.86). Acquirers advised by top-tier advisors have significantly larger market-to-book than acquirers advised by non-top-tier advisors. The mean and median leverage for acquirers advised by top-tier advisors are 0.26 and 0.30, respectively; while the mean and median leverage for acquirers advised by non-top-tier advisors are 0.26 and 0.17, respectively. Acquirers advised by top-tier advisors and acquirers advised by non-top-tier advisors have similar leverage on average, although the difference in median leverage between them is statistically significant. The mean (median) cash flows-to-equity for acquirers advised by top-tier and non-top-tier advisors are 0.06 (0.06) and 0.02 (0.05), respectively. The difference in cash flows-to-equity between acquirers advised by top-tier and non-top-tier advisors are significant. The mean (median) stock price runup for acquirers advised by top-tier advisors is 17.85% (11.86%), while the mean (median) runup for acquirers advised by non-top-tier advisors is 22.55% (13.62%). Acquirers advised by top-tier advisors have significantly lower runup than acquirers advised by non-top-tier advisors. Over the five-year period prior to acquisition, acquirers advised by top-tier and non-top-tier advisors made 8.64 and 5.22 deals on average, respectively; and the difference is significant.

Panel C of Table 2.2 represents deal characteristics for the sub-sample of deals advised by banks. The mean (median) transaction value for deals advised by top-tier and non-top-tier advisors are $1452.69 million ($339.50 million) and $327.89 million ($69.49 million), respectively. The value of deals advised by top-tier advisors is significantly larger than the

value of deals advised by non-top-tier advisors. In contrast, the mean (median) relative size for deals advised by top-tier and non-top-tier advisors are 0.33 (0.16) and 0.38 (0.18), respectively. The relative size of deals advised by top-tier advisors is significantly smaller than the relative size of deals advised by non-top-tier advisors. Although the value of deals advised by top-tier advisors is 4.43 times as large as the value of deals advised by non-top-tier advisors, firm size of acquirers advised by top-tier advisors is 4.84 times as large as firm size of acquirers advised by non-top-tier advisors. Therefore, it is reasonable that the relative size of deals advised by top-tier advisors is smaller. Public, private, and subsidiary acquisitions account for 53.59%, 23.27% and 23.14% of deals advised by top-tier advisors, respectively; whereas, public, private, and subsidiary acquisitions occupy 37.21%, 41.52% and 21.27% of deals advised by top-tier advisors, respectively. Top-tier banks advise a significantly higher percentage of public acquisitions, but a lower percentage of private acquisitions than non-top-tier advisors. In deals advised by top-tier advisors, 22.08%, 40.41% and 37.51% of deals are all-stock deals, all-cash deals and mixed deals, respectively. By contrast, in deals advised by non-top-tier advisors, 30.96%, 31.97% and 37.07% of deals are all-stock deals, all-cash deals and mixed deals, respectively. Top-tier banks advise a significantly lower percentage of all-stock deals, but a higher percentage of all-cash deals than non-top-tier advisors. Hostile deals accounts for 1.85% and 0.34% of deals advised by top-tier and non-top-tier advisors, respectively. The difference in deal attitude between deals advised by top-tier and non-top-tier advisors is significant. Acquirers advised by top-tier advisors conduct a significantly higher percentage of competing bids than acquirers advised by non-top-tier advisors (2.83% versus 1.28%). Tender offers account for 19.51% and 12.18% of deals advised by top-tier and non-top-tier advisors, respectively. Acquirers advised by top-tier advisors make significantly more tender offers than acquirers advised by non-top-tier advisors. Acquirers

advised by top-tier and non-top-tier advisors make a similar percentage of diversifying deals (34.81% versus 34.79%).

Panel D of Table 2.2 presents market characteristics for the sub-sample of deals advised by advisors. The degree of M&A heat is significantly negatively related to the retention of top-tier advisors, indicating that top-tier advisors tend to be retained when the M&A market is relatively cold. Additionally, 28.48% and 28.35% of deals advised by top-tier advisors are conducted in high and low valuation markets, respectively; while 25.17% and 22.75% of deals advised by non-top-tier advisors are conducted in high and low valuation markets, respectively. Both high and low valuation markets are significantly related to the retention of top-tier advisors.

Panel E of Table 2.2 presents financial advisors related information for the sub-sample of deals advised by banks. On average, acquirers who choose top-tier advisors retain 1.44 advisors for one deal, while acquirers who only choose non-top-tier advisors retain 1.06 advisors. Acquirers who retain top-tier advisors tend to use more advisors for one deal than acquirers who retain non-top-tier advisors. Furthermore, the mean (median) total advisory fees paid by acquirers advised by top-tier and non-top-tier advisors are $6.37 million ($3.48 million) and $2.06 million ($0.85 million), respectively. Acquirers advised by top-tier advisors paid 3.09 times higher total advisory fees than acquirers advised by non-top-tier advisors.

Overall, Table 2.2 shows that deals advised by top-tier advisors generate significantly lower short-term returns but significantly higher long-term returns to acquirers than deals advised by non–top-tier advisors. Top-tier advisors charge much higher advisory fees, leading to negative market sentiment and finally result in poorer acquirer short-term

performance. However, this chapter argues that if the synergy identified by top-tier advisors does exist, then it will take time to transfer potential synergies into improved performance, eventually being perceived by markets. The long-term outperformance of acquirers advised by top-tier advisors indicates that top-tier advisors have superior skills. In addition, larger firms, more glamour firms, firms with more cash flows, and firms that have lower pre-deal stock performance tend to choose top-tier advisors. The existing literature suggests that firm size (Moeller, Schlingemann and Stulz, 2004) and cash-richness (Harford, 1999) are negatively related to acquirer announcement returns. Therefore, short-term underperformance of acquirers advised by top-tier banks can be partially explained by these firm characteristics. Furthermore, top-tier advisors tend to be retained when the deal is large, when the target is publicly listed, when the deal attitude is hostile, when multiple bidders compete, and when the deal is a tender offer. Large deals, public acquisitions, hostile deals, competing bids and tender offers are much more complex and difficult to conduct. In other words, top-tier advisors are more likely to be chosen when deals are complex. However, in more complex situations, top-tier advisors can still improve acquirer long-term performance, indicating that they have superior skills.

2.5.1.3. Sub-Sample of Deals Advised by Top-Tier Advisors

Table 2.3 exhibits summary statistics for the sub-sample of deals advised by top-tier investment banks and the univariate comparison between deals advised by a single top-tier advisor and multiple top-tier advisors. In deals advised by top-tier banks, acquirers in 92.42% of deals retain only one top-tier advisor, while 7.58% of deals are advised by multiple top-tier advisors.

[Insert Table 2.3 here]

Panel A of Table 2.3 shows acquirer short- and long-term abnormal returns for the sub-sample of deals advised by top-tier advisors. The mean and median CAR [-2, 2] for acquirers advised by single advisors are 0.69% (p=0.012) and 0.53% (p=0.003), respectively; while the mean and median CAR [-2, 2] for acquirers advised by non-top-tier advisors are 1.73% (p=0.107) and 0.51% (p=0.195), respectively. Furthermore, the mean and median BHAR36 for acquirers advised by top-tier advisors are -25.25% (p=0.000) and -36.79% (p=0.000), respectively; while the mean and median BHAR36 for acquirers advised by non-top-tier advisors are -34.63% and -41.11%, respectively. For both short- and long-term performance, the difference between acquirers advised by single top-tier advisor and multiple top-tier advisors are insignificant.

Panel B of Table 2.3 presents acquirer characteristics for the sub-sample of deals advised by top-tier advisors. Acquirers advised by single top-tier advisors are significantly smaller in size than acquirers advised by multiple top-tier advisors. The median market-to-book for acquirers advised by single top-tier advisors is significantly higher than that for acquirers advised by multiple top-tier advisors, although the difference in mean market-to-book between the two acquirer-groups is insignificant. Furthermore, acquirers advised by a single top-tier advisor have significantly higher leverage and cash flows-to-equity than acquirers advised by multiple top-tier advisors. In terms of stock price, runup and past takeover experience, acquirers advised by a single top-tier advisor and multiple top-tier advisors is insignificant.

Panel C of Table 2.3 shows deal characteristics for the sub-sample of deals advised by top-tier advisors. Deals advised by a single top-tier advisor have significantly lower transaction value and relative size than deals advised by multiple top-tier advisors. Acquirers advised by a single top-tier advisor conduct a lower percentage of public

acquisitions, but a higher percentage of private acquisitions than acquirers advised by multiple top-tier advisors. Acquirers advised by a single top-tier advisor make a higher percentage of all-cash deals, but a lower percentage of mixed paid deals than acquirers advised by multiple top-tier advisors. Compared with acquirers advised by multiple top-tier advisors, acquirers advised by a single top-tier advisor conduct a lower percentage of hostile deals, but a higher percentage of diversifying deals.

Panel D of Table 2.3 presents market characteristics for the sub-sample of deals advised by top-tier advisors. A single top-tier advisor is positively related to the degree of M&A market heat, indicating that acquirers tend to retain a single top-tier advisor (multiple top-tier advisors) when the M&A market is relatively hot (cold). Furthermore, acquirers are more likely to retain a single top-tier advisor (multiple top-tier advisors) when the market valuation is high (low).

Panel E of Table 2.3 shows financial advisor related information for the sub-sample of deals advised by top-tier advisors. Compared with acquirers advised by multiple top-tier advisors, acquirers advised by a single top-tier advisor also retain a significantly smaller overall number of acquirers. Acquirers advised by a single top-tier advisor pay significantly lower total advisory fees than acquirers advised by multiple top-tier advisors.

Overall, acquirers advised by a single top-tier advisor and multiple top-tier advisors have similar short- and long-term performance. Acquirers with a larger size, lower market-to-book, higher leverage, and higher cash flows-to-equity are more likely to retain multiple top-tier advisors. In addition, multiple top-tier advisors tend to be retained, when the transaction value and relative size of the deal are large, when the target is publicly

listed, when the deal is mixed paid, and when the deal attitude is hostile. These results indicate that multiple top-tier advisors are retained to conduct more complex deals.

2.5.2. Regression Analysis

Since univariate tests do not consider the interaction of alternative variables, the results could be unreliable. Therefore, multivariate regressions are necessary. Initially, this chapter investigates whether top-tier advisors improve acquirers' short- and long-term performance. Furthermore, this chapter explores which acquirers tend to conduct in-house deals or retain top-tier advisors. Finally, this chapter will address the endogeneity issue.

2.5.2.1. Acquirer Performance

2.5.2.1.1. Short-Term Performance

Table 2.4 shows the results of the short-term regression analysis. The dependent variable is CAR [-2, 2]. *TopTier* and *No. of TopTier* are the key explanatory variables of this research. Specifications 1, 3, 5 and 7 represent the regressions of CAR [-2, 2] on the *TopTier* dummy for all acquisitions, public acquisitions, private acquisitions and subsidiary acquisitions, respectively. Specifications 2, 4, 6 and 8 represent the regressions of CAR [-2, 2] on the variable *No. of TopTier* for all acquisitions, public acquisitions, private acquisitions and subsidiary acquisitions, respectively.

[Insert Table 2.4 here]

The *TopTier* dummy is insignificant in the regressions for the full sample (Specification 1), the public acquisitions sub-sample (Specification 3) and the subsidiary acquisitions sub-sample (Specification 7) but is significantly negative in the regression for the private

acquisitions sub-sample (Specification 5). These results indicate that the retention of top-tier advisors do not lead to more positive market reactions compared to the retention of non-top-tier advisors during the announcement period. In private acquisitions, acquirers that retain top-tier advisors even underperform other acquirers. Private acquisitions are relatively easier to conduct than public acquisitions. However, the advisory fees of top-tier investment banks are too expansive. Therefore, investors may believe that the retention of top-tier advisors in private acquisitions is unnecessary and overpaid, leading to negative market sentiment. These results are inconsistent with Golubov, Petmezas and Travlos (2012). They find that the effects of top-tier advisors on announcement returns are positive in public acquisitions, but insignificant in private and subsidiary acquisitions. One possible explanation for these differences is that the sample of Golubov, Petmezas and Travlos (2012) include both completed and uncompleted deals, whereas this chapter only investigates completed deals. If top-tier advisors help acquirers refuse to make value-destroying deals, the market reactions will be positive. However, uncompleted deals are excluded in this research, since this chapter focuses on the effects of top-tier advisors on the long-term performance of acquirers that complete deals.

Similarly, the variable *No. of TopTier* is insignificant in the regression for the full sample (Specification 2), and the subsidiary acquisitions sub-sample (Specification 8), but is significantly negative in the regression for the private acquisitions sub-sample (Specification 5). These results also indicate that acquirers advised by top-tier advisors or multiple top-tier advisors do not outperform other acquirers. In private acquisitions, the more top-tier advisors are retained, the lower returns an acquirer will gain. Unlike the *TopTier* dummy, the variable *No. of TopTier* is marginally significant (p=0.097) in the regression for the public acquisitions sub-sample (Specification 4). However, the magnitude of the coefficient on *No. of TopTier* is too small.

In addition, the variable *No. of Advisors* is insignificant in most of the specifications, but is marginally significantly negative in specification 8, indicating that increase in the number of advisors retained will not lead to better acquirer short-term performance. The *InHouse* dummy is significantly positive in the regressions for the full sample (Specifications 1 and 2). This result is mainly drive by the private acquisitions sub-sample. Specifically, the *InHouse* dummy is significantly positive in the regressions for the private acquisitions (Specifications 5 and 6) but is insignificant in the regressions for the public acquisitions (Specifications 3 and 4). In the sample, there are no in-house acquisitions of subsidiary targets. These results indicate that the stock market rewards attempts to make in-house acquisitions of private targets. In private acquisitions, acquirers who make in-house deals outperform acquirers advised by investment banks by about 5%, after controlling for firm, deal and market characteristics. However, since public acquisitions are more complex, in-house expertise cannot improve acquirer announcement performance.

Furthermore, the variable *Ln(MV)* is significantly negative in specifications 1 to 4, suggesting that larger acquirers tend to gain lower announcement returns. The variable *Leverage* is significantly positive in specifications 1 and 2, indicating that acquirers with higher leverage gain higher announcement returns. In other words, debts help alleviate conflicts of interest and therefore improve acquirer announcement performance. The variable *Relative Size* is significantly positive in specifications 1, 2, 5, 6, 7 and 8, indicating that relatively larger deals create more announcement returns for acquirers in general. However, the variable *Relative Size* is significantly negative in specifications 3 and 4 – the regressions for public acquisitions sub-sample. In public acquisitions, acquirers tend to be large firms. Therefore, a larger relative size implies a larger target size. In other words, if the target size is too large, the market reaction will be negative. The

Cash dummy is significantly positive in specifications 1 to 4, suggesting that cash deals have better announcement performance. The *Competing Bid* dummy is significantly negative in all of the specifications, indicating that takeover contests have a detrimental influence on acquirer announcement returns. The *Tender Offer* dummy is significantly positive in specifications 1 to 4, but is significantly negative in specifications 5 and 6, implying that tender offers are associated with better short-term performance in public acquisitions, but poorer performance in private acquisitions. The *Public* dummy is significantly negative in specifications 1 and 2, implying that public acquisitions underperform private and subsidiary acquisitions around announcements. These results are consistent with the existing literature.

2.5.2.1.2. Long-Term Performance

Table 2.5 shows the results of the short-term regression analysis. Specifications 1, 3, 5 and 7 represent the regressions of BHAR36 on the *Top-Tier* dummy for all acquisitions, public acquisitions, private acquisitions and subsidiary acquisitions, respectively. Specifications 2, 4, 6 and 8 represent the regressions of BHAR36 on the variable *No. of Top-Tier* for all acquisitions, public acquisitions, private acquisitions and subsidiary acquisitions, respectively.

[Insert Table 2.5 here]

In contrast to the results of short-term performance analysis, the *TopTier* dummy is significantly positive in the regressions of BHAR36 for the entire sample (Specification 1), the public acquisitions sub-sample (Specification 3) and the private acquisitions sub-sample (Specification 5). The retention of top-tier advisors improves long-term

performance by 13.90%, 12.59% and 20.23% in the entire sample, public acquisitions sub-sample, and private acquisitions sub-sample, respectively, after firm, deal, and market characteristics are controlled for. These results indicate that top-tier advisors have a superior ability to help their clients outperform other acquirers. Since potential synergies need time to be materialized, positive effects of top-tier advisors are shown in the long term.

Similarly, the variable *No. of TopTier* is also significantly positive in the regressions of BHAR36 for the entire sample (Specification 2), the public acquisitions sub-sample (Specification 4) and the private acquisitions sub-sample (Specification 6). This result indicates that the larger the number of top-tier advisors retained, the better the long-term performance gained by acquirers. In contrast, the variable *No. of Advisors* is significantly negative in the regressions for the entire sample (Specifications 1 and 2), the pubic acquisitions sub-sample (Specification 4), the private acquisitions sub-sample (Specification 6), and the subsidiary acquisitions sub-sample (Specification 7 and 8). This result is inconsistent with Hunter and Jagtiani (2003) – that the number of advisors retained is positively related to acquirer post-deal performance. Hunter and Jagtiani (2003) do not distinguish between number of advisors and number of top-tier advisors. After the variable *No. of TopTier* is added in the regression, this chapter finds that an increase in the number of top-tier advisors rather than an increase in the overall number of advisors leads to improvement in acquirer long-term performance, reflecting top-tier advisors' superior skills. In addition, the *InHouse* dummy is insignificant in all of the specifications, indicating that in-house deals do not create more returns to acquirers in the long term than deals advised by investment banks.

Furthermore, the variable *M/B* is significantly negative in specifications 1 and 2, suggesting that glamour acquirers underperform in the long term. The variable *Cash*

Flows/Equity is significantly positive in specifications 1, 2, 7 and 8, indicating that acquirers who have better pre-deal operating performance are more likely to gain higher long-term returns. The variable *RUNUP* is significantly negative in specifications 1, 2, 3, 4, 7 and 8, indicating that firms with better stock performance prior to announcements underperform during the post-merger period. The variable *Relative Size* is significantly positive in specifications 1 and 2, suggesting that acquisitions of relatively larger targets generate higher long-term returns for acquirers. The variable *Stock* is significantly negative in specification 3, suggesting that acquirers that make all-stock deals underperform in the long-term. The variable *Cash* is significantly positive in specifications 1, 2, 5 and 6, indicating that acquirers that conduct all-cash deals gain better performance in the long term. The variable *Hostile* is significantly positive in specifications 1, 2, 3, 4, 7 and 8, indicating that hostile deals are associated with better long-term performance. The *Low Valuation Market* dummy is significantly positive in specifications 7 and 8, suggesting that acquisitions conducted in a "bear market" gain higher long-term returns. Generally, these results are consistent with the existing literature.

2.5.2.2. Determinants of Decisions on Making In-House Deals or Retaining Top-tier Advisors

Table 2.6 shows the result of a bivariate probit model of the decisions on making in-house deals or retaining top-tier advisors. Specifications 1 and 2 show the probability of making in-house deals and the probability of retaining top-tier advisors, respectively.

[Insert Table 2.6 here]

In specification 1, the variables *Ln(MV)*, *Relative Size*, *Hostile*, and *Tender Offer* are significantly negative, while the variables *M/B*, *Past Experience*, *Public*, *M&A Heat*

Degree, and *Low Valuation Market* are significantly positive. These results suggest that smaller firms, glamour firms and firms with more past experience are more likely to make in-house deals. Furthermore, firms tend to make in-house deals when the relative size of deal is small, when the deal attitude is friendly, when the target is public listed, when the M&A market is hot, and when the stock market valuation is low.

In specification 2, the variables *Ln(MV)*, *Cash Flows/Equity*, *Relative Size*, and *Hostile* are significantly positive, while the variables *M/B*, *Past Experience*, *RUNUP*, *Stock*, and *Diversification* are significantly negative. These results indicate that large firms, value firms, cash-rich firms, firms that lack past experience, and firms with relatively poor stock performance are more likely to retain top-tier advisors. Furthermore, firms tend to retain top-tier advisors when the relative size of the deal is large or when the attitude of a deal is hostile. Additionally, this chapter suspects that the negative relations between the choice of top-tier advisors and diversification deals is supply-driven rather than demand-driven. In particular, this is true during the sample period as top-tier advisors are not willing to get involved in diversifying deals.

Overall, large firms are more likely to retain top-tier advisors, but less likely to make in-house deals. When the deal is complex and difficult to conduct, firms are more likely to retain top-tier advisors, but less likely to make in-house deals.

2.5.2.3. Discussion

The aforementioned results show that both the variables *TopTier* and *No. of TopTier* are significantly related to BHAR36, but insignificantly related to CAR [-2, 2], indicating that the retention of top-tier advisors does not lead to positive market reaction in the short term, but improves acquirer performance in the long term. This chapter argues that if the

synergy identified by top-tier advisors does exist, then it will take time to transfer that potential synergy into improved performance before eventually being perceived by markets. Therefore, the above results suggest that top-tier advisors have a superior ability to help their clients outperform other acquirers. In addition, multiple top-tier advisors can cooperate well and make a concerted effort to deliver a value-increasing advisory service.

Furthermore, according to the bivariate probit model, size and cash flows-to-equity ratio are the two most important acquirer firm characteristics that influence the choice of top-tier advisors, in terms of magnitude and significance. However, large firms tend to be hubristic (Moeller, Schlingemann and Stulz, 2004), and hubris destroys value for acquirers (Roll, 1986). In addition, cash-rich firms are more likely to exhibit overconfidence and overconfident CEOs tend to conduct value-decreasing acquisitions (Malmendier and Tate, 2008). Hubristic or overconfident acquirers overestimate their ability to create synergies and retain top-tier advisors mostly to complete their intended deals. As a consequence, even if top-tier advisors have superior skills, their effects will be offset by acquirer overconfidence. Therefore, this chapter divided the entire sample into sub-groups based on acquirer size and cash flows-to-equity ratio, thereby examining whether top-tier advisors' effects on acquirer long-term performance differ across these sub-groups.

Table 2.7 presents the results of regression analysis of acquirer long-term performance for sub-samples of acquirers with different size. Specifically, the entire sample is divided into small and large acquirer sub-samples based on acquirer market value of equity measured four weeks prior to the announcement. Specifications 1 and 2 represent the long-term performance for the sub-sample of small acquirers. Specifications 3 and 4 represent the long-term performance for the sub-sample of large acquirers.

[Insert Table 2.7 here]

The coefficients on the *TopTier* dummy are significantly positive in the regressions of BHAR36 for the small acquirer sub-sample (Specification 1), and the large acquirer sub-sample (Specification 3). The retention of top-tier advisors improves acquirer long-term performance by 18.42%, and 14.55% in the small acquirer sub-sample, and the large acquirer sub-sample, respectively; after firm, deal, and market characteristics are controlled for. Similarly, the coefficients on the variable *No. of TopTier* are also significantly positive in the regressions of BHAR36 for the small acquirer sub-sample (Specification 2), and the large acquirer sub-sample (Specification 4). These results are consistent with the previous results that increase in the number of top-tier advisors retained associate with better acquirer long-term performance. However, the magnitude of the coefficients on the variable *No. of TopTier* is larger in the regression of BHAR36 for the small acquirer sub-sample (Specification 2) than in the regression of BHAR36 for the large acquirer sub-sample (Specification 4). These results suggest that top-tier advisors exercise more positive effects on small acquirers than on large acquirers.

Table 2.8 presents the results of regression analysis of acquirer long-term performance for sub-samples of acquirers with different cash flows-to-equity ratio. Specifically, the entire sample is divided into low and high cash flows-to-equity acquirer sub-samples. Specifications 1 and 2 represent the long-term performance for the sub-sample of low cash flows-to-equity acquirers. Specifications 3 and 4 represent the long-term performance for the sub-sample of high cash flows-to-equity acquirers.

[Insert Table 2.8 here]

The coefficients on the *TopTier* dummy are significantly positive in the regressions of BHAR36 for the low cash flows-to-equity acquirer sub-sample (Specification 1), and the high cash flows-to-equity acquirer sub-sample (Specification 3). The retention of top-tier advisors improves acquirer long-term performance by 14.53%, and 11.72% in the small acquirer sub-sample, and the large acquirer sub-sample, respectively, after controlling for firm, deal, and market characteristics. Additionally, the coefficients on the variable *No. of TopTier* are also significantly positive in the regressions of BHAR36 for the low cash flows-to-equity acquirer sub-sample (Specification 2), and the high cash flows-to-equity acquirer sub-sample (Specification 4). These results are consistent with the previous results that retaining more top-tier advisors retained produced better long-term performance gains. However, the magnitude of the coefficients on the variable *No. of TopTier* is larger in the regression of BHAR36 for the low cash flows-to-equity acquirer sub-sample (Specification 2) than in the regression of BHAR36 for the high cash flows-to-equity acquirer sub-sample (Specification 4). These results suggest that effects of top-tier advisors on long-term performance are stronger for low cash flows-to-equity acquirers than for high cash flows-to-equity acquirers.

Overall, these results indicate that the effects of top-tier advisors differ across sub-samples of acquirers with different firm characteristics. Large acquirers and cash-rich acquirers tend to be overconfident. Top-tier advisors have superior skills to improve their clients' performance; however, acquirer overconfidence could offset top-tier advisors' positive effects to some extent.

2.5.2.4. Endogeneity Issue

In the methodology section, this chapter has discussed the possible endogeneity issue due to the decision to retain top-tier advisors. Additionally, the univariate comparison between

acquirers advised by top-tier and non-top-tier advisors shows the significant differences in firm, deal and market characteristics, which imply that the choice of top-tier advisors may be not determined exogenously but endogenously. In other words, the *TopTier* dummy and the term *No. of TopTier* may be two endogenous variables. As mentioned before, this chapter uses IV regression to address the issue.

2.5.2.4.1. Short-Term Performance

Table 2.9 shows the IV (2SLS) regression of the CAR [-2, 2]. Specifications 1 and 2 present the IV (2SLS) regressions of the CAR [-2, 2] on the *TopTier* dummy and the variable *No. of TopTier*, respectively.

[Insert Table 2.9 here]

In specification 1, the first stage regression shows the relation between the choice of top-tier advisors and the firm, deal and market characteristics. The term *Scope*, the instrument variable, is significantly positive (p=0.000), indicating that the choice of top-tier advisors is positively associated with the scope of services by top-tier investment banks used before the given M&A deal. In other words, acquirers that have the past experience in the retention of top-tier advisors are more likely to retain top-tier advisors in the future. This result is consistent with Fang (2005) and Golubov, Petmezas, and Travlos (2012). The results of other variables do not qualitatively differ from the results of previous bivariate probit analysis. The second stage regression shows the relation between short-term performance and the choice of top-tier advisors. The coefficient on the *TopTier* is insignificant, which is consistent with the previous results of the OLS regression of

CAR [-2, 2]. Similarly, the results of other control variables do not differ qualitatively from the results of previous OLS regression of CAR [-2, 2].

In specification 2, the first stage regression shows the relation between the number of top-tier advisors retained and the firm, deal and market characteristics. The term *Scope* is also highly significant (p=0.000). The result once again implies that the preference for top-tier advisors is determined by previous experience retaining them. The results of other variables do not differ qualitatively from the results of previous bivariate probit analysis. The second stage regression shows the relation between short-term performance and the number of top-tier advisors retained. The variable *No. of TopTier* is insignificant, which is consistent with the previous results of OLS regression of CAR [-2, 2]. Similarly, the results of other control variables do not differ qualitatively from the results of previous OLS regression of CAR [-2, 2].

2.5.2.4.2. Long-Term Performance

Table 2.10 shows the IV (2SLS) regression of the BHAR36. Specifications 1 and 2 present the IV (2SLS) regressions of the BHAR36 on the *TopTier* dummy and the variable *No. of TopTier*, respectively.

[Insert Table 2.10 here]

In specification 1, the coefficient on the *TopTier* dummy is statistically significant, and its magnitude is also large. Compared with non-top-tier advisors, the retention of top-tier advisors improves acquirer post-deal long-term performance by 47.15%. In specification 2, the coefficient on the variable *No. of TopTier* is also significant, and its marginal effect

equals 42.95%. These results are not qualitatively different from the results of the OLS regression of BHAR36. However, the marginal effect of the *TopTier* dummy and the variable *No. of TopTier* largely increases, suggesting that the endogeneity issue renders the effects of top-tier advisors undervalued. Additionally, the results of other control variables do not qualitatively differ from the results of previous OLS regression of BHAR36.

Overall, the endogeneity does not qualitatively impact the results, but leads to undervaluation of the top-tier advisors' effects on acquirer long-term performance.

2.5.3. Robustness Test

This chapter addresses the robustness of results as follows. Tables 2.11 and 2.12 show the robustness tests of acquirer short-term performance and long-term performance, respectively.

2.5.3.1. Short-Term Performance

To examine whether the results are robust, this chapter uses alternative event windows and valuation models to measure acquirer short-term performance. Specifically, this chapter calculates CARs over the [-1, 1] and [-5, 5] windows. In addition, this chapter applies the market model, the Fama-French three-factor model (Fama and French, 1993), and the Fama-French-momentum four-factor model (Fama and French, 1993; Carhart, 1997) to compute announcement abnormal returns.

The market model is shown as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

where R_{it} is the daily stock return for firm I on date t and R_{mt} is the daily return for the value-weighted CRSP index on date t. The market model parameters are estimated over the pre-event window [-365, -28]. Subsequently, market model CARs are calculated over a [T_1, T_2] window around announcements, as follows:

$$CAR_{i,T_1T_2} = \sum_{t=T_1}^{T_2} \left[R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt})\right]$$

The Fama-French three-factor model is shown as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + s_i SMB_t + h_i HML_t + \varepsilon_{it}$$

where R_{it} is the daily stock return for firm I on date t, R_{mt} is the daily return for the value-weighted CRSP index on date t, SMB_t is the difference in the average return between the three small-size and the three big-size portfolios, and the HML_t is the difference in the average return between the two high market-to-book and the two low market-to-book portfolios. The Fama-French three-factor model parameters are estimated over the pre-event window [-365, -28]. Subsequently, Fama-French three-factor model CARs are calculated over a [T_1, T_2] window around announcements, as follows:

$$CAR_{i,T_1T_2} = \sum_{t=T_1}^{T_2} \left[R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt} + \hat{s}_i SMB_t + \hat{h}_i HML_t)\right]$$

The Fama-French-momentum four-factor model is shown as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + s_i SMB_t + h_i HML_t + u_i UMD_t + \varepsilon_{it}$$

where R_{it} is the daily stock return for firm I on date t, R_{mt} is the daily return for the value-weighted CRSP index on date t, SMB_t is the difference in the average return between the three small size and the three big size portfolios, the HML_t is the difference in the average return between the two high market-to-book and the two low market-to-book portfolios, and the UMD_t is the difference in average return between the two high prior

return and the two low prior return portfolios. The Fama-French-momentum four-factor model parameters are estimated over the pre-event window [-365, -28]. Subsequently, Fama-French-momentum four-factor model CARs are calculated over a [T_1, T_2] window around announcements, as follows:

$$CAR_{i,T_1T_2} = \sum_{t=T_1}^{T_2} \left[R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt} + \hat{s}_i SMB_t + \hat{h}_i HML_t + \hat{u}_i UMD_t)\right]$$

The results are not sensitive to these variations.

2.5.3.2. Long-Term Performance

This chapter also uses alternative event windows and valuation models to measure acquirer long-term performance. Specifically, this chapter calculates BHARs over 12-month and 24-month windows. In addition, this chapter calculates market-adjusted BHARs. The market-adjusted BHARs are calculated over a [T1, T2] post-announcement window, as follows:

$$BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2}(1 + R_{it}) - \prod_{t=T_1}^{T_2}(1 + R_{mt})$$

where R_{it} is the monthly stock return for firm *I* in month *t* and R_{mt} is the monthly return for the value-weighted CRSP market index in month *t*.

For size-adjusted BHARs, this chapter also uses the following alternative formula:

$$BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2}(1 + R_{it}) - 1 - R_{pt}$$

where R_{it} is the monthly stock return for firm *I* in month *t* and R_{pt} is the monthly buy-and-hold return for the reference portfolio in month t, calculated as

$$R_{pt} = \sum_{j=1}^{n} \frac{\prod_{t=T_1}^{T2}(1 + R_{jt}) - 1}{n}$$

with R_{jt} the monthly stock return for firm *j* in month *t* and *n* the number of firms.

The results are robust to these variations.

2.5.3.3. Financial Advisor Classification

This chapter also evaluates whether the results are sensitive to different financial advisor classifications. Specifically, this chapter follows Rau's (2000) method using the top-five cut-off point; Golubov, Petmezas and Travlos' (2012) method using the top-eight cut-off point; and Hunter and Jagtiani's (2003) method using the top-fifteen cut-off point. The results are robust to these classifications.

2.5.3.4. Other Issues

To control for the impact of outliers, this chapter also winsorizes all the continuous variables at different levels, such as 2% and 98%, 3% and 97%, and 5% and 95%. In terms of sample selection, this chapter removes the restriction on regulated industries. When the financial and utility firms (SIC codes 6000–6999 and 4900–4999, respectively) are added, the number of observations for the final sample increases to 4317. For the regressions of total advisory fees and time-to-completion, this chapter also applies OLS regressions, using the natural logarithm of total advisory fees and time-to-completion as the dependent variables. For the probability of making in-house deals and the retention of top-tier advisors, this chapter also separately runs two probit regressions rather than conducting the bivariate probit model. However, the results are not sensitive to the above variations.

2.6. Conclusion

This chapter investigates whether top-tier financial advisors can help their acquirer clients gain superior acquisition performance. Unlike most previous studies that only focus on announcement effects, this chapter argues that merger synergies should be materialized in the long term and finally perceived by the market. Therefore, this chapter examines financial advisors' effects on acquirer performance in both the short and long term. More importantly, this chapter distinguishes deals advised by multiple top-tier advisors from deals advised by single top-tier advisors and evaluates whether multiple top-tier advisors can make a concerted effort to add value to their clients.

In the short term, the retention of top-tier advisors does not improve acquirer performance. Additionally, an increase in the number of top-tier advisors retained does not lead to higher announcement returns to acquirers. In private acquisitions, acquirers advised by either a single top-tier advisor or multiple top-tier advisors underperform other acquirers. This result is not difficult to interpret. Compared to public acquisitions, private acquisitions are relatively easier to conduct. Investors may think that the retention of top-tier advisors in private acquisitions is unnecessary and overpaid. As a consequence, the market reactions are negative around announcement.

In the long term, acquirers that retain top-tier advisors outperform other acquirers by 13.90% on average, after controlling for firm, deal and market characteristics. The effects of top-tier advisors on acquirer long-term performance are also significantly positive in the public and private acquisitions. More importantly, the retention of multiple top-tier advisors leads to better long-term performance, whereas an increase in the total number of

advisors has negative effects on post-announcement buy-and-hold abnormal returns. This comparison highlights the superior skills of top-tier advisors.

Since deals advised by top-tier and non-top-tier advisors have significant differences in firm, deal and market characteristics, the choice of top-tier advisors may be determined endogenously. Therefore, this chapter addresses the endogeneity issue by conducting IV regressions. The results show that the endogeneity does not qualitatively impact the results but renders top-tier advisors' effects on acquirer long-term performance undervalued. After endogeneity is controlled for, the retention of top-tier advisors improves acquirer long-term performance by 47.15%.

This chapter is also interested in in-house deals. In terms of wealth creation, in-house acquirers do not outperform acquirers advised by financial advisors. Additionally, acquirers that make in-house deals pay much higher bid premiums and take longer to complete deals. These results suggest that financial advisors have professional skills in making M&A deals. Furthermore, this chapter finds that experienced firms, glamour firms, and small firms are more likely to make in-house deals, whereas large firms, and cash-rich firms are more likely to retain top-tier advisors. Top-tier advisors also tend to be retained when deals are more complex.

Overall, although top-tier advisors are retained in complex deals, they help their acquirer clients make superior deals that realise synergies in the long term. The retention of multiple top-tier advisors does not aggravate conflicts of interest. Multiple top-tier advisors are capable of cooperating well and making concerted efforts, thereby creating values to their clients.

Table 2.1 Summary statistics for the entire sample

This table presents summary statistics for the entire sample and univariate comparison between deals advised by investment banks and in-house deals. Panel A reports acquirer short- and long-term abnormal returns. CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around announcement. BHAR36 is the post-merger 36-month size-adjusted buy-and-hold abnormal returns. Panel B reports acquirer firm characteristics. MV is market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Panel C reports deal characteristics. Transaction Value is the value of the deal. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Private dummy equals one if the target is a private firm. Subsidiary dummy equals one if the target is a subsidiary firm. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Mixed dummy equals one if the deal is mixed paid by both stock and cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Time-to-completion is measured as the number of days between announcement and effective date. Bid premium, obtained from Thomson One Banker, is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement. Panel D reports market characteristics. M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. Panel E reports financial advisor related information. No. of advisors is the number of financial advisors retained by an acquirer. Acquirer total advisory fees, obtained from Thomson One Banker, is the total advisory fees paid by an acquirer to all the financial advisors retained. P-Values are shown in parentheses (the t-test and the Wilcoxon signed-rank test for the mean and median CAR [-2, 2], respectively; the bootstrapped skewness-adjusted t-statistic and the Wilcoxon signed-rank test for the mean and median BHAR36, respectively; the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	All Deals			Advisor (A)			In-House (I)			Difference (A) – (I)			
										Mean		Median	
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Abnormal Returns													
CAR[-2,2]	1.28%***	0.68%***	3103	1.27%***	0.68%***	3003	1.78%***	0.69%*	100	-0.51%	(0.511)	-0.02%	(0.635)
	(0.000)	(0.000)		(0.000)	(0.000)		(0.020)	0.056					
BHAR36	-33.01%***	-44.58%***	3103	-32.88%***	-44.58%***	3003	-36.89%***	-44.49%***	100	4.00%	(0.635)	-0.09%	(0.998)
	(0.000)	(0.000)		(0.000)	(0.000)		(0.001)	(0.000)					
Panel B: Firm Characteristics													
MV ($ mil.)	9236.24	1018.32	3103	8151.21	1004.32	3003	41819.53	1952.53	100	-33668.32***	(0.000)	-948.21***	(0.000)
M/B	5.91	3.06	3103	5.81	3.01	3003	8.97	4.82	100	-3.16*	(0.052)	-1.81***	(0.000)
Leverage	0.26	0.25	3103	0.26	0.25	3003	0.25	0.27	100	0.01	(0.767)	-0.03	(0.828)
Cash Flows/Equity	0.04	0.05	3103	0.04	0.05	3003	0.04	0.05	100	0.00	(0.849)	0.00	(0.440)
RUNUP	20.07%	12.67%	3103	20.18%	12.63%	3003	16.93%	13.73%	100	3.25%	(0.543)	-1.10%	(0.881)
Past Experience	7.27	4.00	3103	6.95	4.00	3003	16.94	9.00	100	-9.99***	(0.000)	-5.00***	(0.000)
Panel C: Deal Characteristics													
Transaction Value ($ mil.)	880.92	158.50	3103	896.10	160.40	3003	425.18	101.60	100	470.92***	(0.000)	58.80***	(0.010)
Relative Size	0.34	0.16	3103	0.35	0.17	3003	0.08	0.05	100	0.27***	(0.000)	0.12***	(0.000)
Public	46.79%	–	3103	45.49%	–	3003	86.00%	–	100	-40.51%***	(0.000)	–	–
Private	31.71%	–	3103	32.30%	–	3003	14.00%	–	100	18.30%***	(0.000)	–	–
Subsidiary	21.50%	–	3103	22.21%	–	3003	0.00%	–	100	22.21%***	(0.000)	–	–
All-Stock Deals	27.30%	–	3103	26.47%	–	3003	52.00%	–	100	-25.53%***	(0.000)	–	–
All-Cash Deals	36.06%	–	3103	36.23%	–	3003	31.00%	–	100	5.23%***	(0.271)	–	–
Mixed Deals	36.64%	–	3103	37.30%	–	3003	17.00%	–	100	20.30%***	(0.000)	–	–

Hostile	1.06%	–	3103	1.10%	–	3003	0.00%	–	100	1.10%***	(0.000)	–	–
Competing Bid	2.06%	–	3103	2.06%	–	3003	2.00%	–	100	0.06%	(0.964)	–	–
Tender Offer	15.98%	–	3103	15.88%	–	3003	19.00%	–	100	-3.12%	(0.438)	–	–
Diversification	35.00%	–	3103	34.80%	–	3003	41.00%	–	100	-6.20%	(0.219)	–	–
Panel D: Market Characteristics													
M&A Heat Degree	1.48	1.44	3103	1.47	1.43	3003	1.82	1.85	100	-0.35***	(0.000)	-0.42***	(0.000)
High Valuation Market	27.94%	–	3103	26.84%	–	3003	61.00%	–	100	-34.16%***	(0.000)	–	–
Low Valuation Market	24.85%	–	3103	25.57%	–	3003	3.00%	–	100	22.57%***	(0.000)	–	–
Panel E: Financial Advisors													
No. of Advisors	1.14	1.00	3003	1.14	1.00	3003	–	–	–	–	–	–	–
Total Advisory Fees ($ mil.)	4.15	1.58	523	4.15	1.58	523	–	–	–	–	–	–	–

Table 2.2 Summary statistics for the sample of deals advised by investment banks

This table presents summary statistics for the sample of deals advised by investment banks and univariate comparison between deals advised by top-tier and non-top-tier advisors. Panel A reports acquirer short- and long-term abnormal returns. CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around announcement. BHAR36 is the post-merger 36-month size-adjusted buy-and-hold abnormal returns. Panel B reports acquirer firm characteristics. MV is market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Panel C reports deal characteristics. Transaction Value is the value of the deal. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Private dummy equals one if the target is a private firm. Subsidiary dummy equals one if the target is a subsidiary firm. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Mixed dummy equals one if the deal is mixed paid by both stock and cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Time-to-completion is measured as the number of days between announcement and effective date. Bid premium, obtained from Thomson One Banker, is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement. Panel D reports market characteristics. M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. Panel E reports financial advisor related information. No. of advisors is the number of financial advisors retained by an acquirer. Acquirer total advisory fees, obtained from Thomson One Banker, is the total advisory fees paid by an acquirer to all the financial advisors retained. P-Values are shown in parentheses (the t-test and the Wilcoxon signed-rank test for the mean and median CAR [-2, 2], respectively; the bootstrapped skewness-adjusted t-statistic and the Wilcoxon signed-rank test for the mean and median BHAR36, respectively; the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	Advisor			Top-Tier (T)			Non-Top-Tier (N)			Difference (T) – (N)			
										Mean		Median	
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Abnormal Returns													
CAR[-2,2]	1.27%***	0.68%***	3003	0.76%***	0.53%***	1517	1.78%***	1.06%***	1486	-1.01%**	(0.012)	-0.54%**	(0.018)
	(0.000)	(0.000)		(0.004)	(0.001)		(0.000)	(0.000)					
BHAR36	-32.88%***	-44.58%***	3003	-25.96%***	-37.31%***	1517	-39.95%**	-53.25%***	1486	13.99%***	(0.000)	15.94%***	(0.000)
	(0.000)	(0.000)		(0.000)	(0.000)		(0.048)	(0.000)					
Panel B: Firm Characteristics													
MV ($ mil.)	8151.21	1004.32	3003	13419.07	2504.71	1517	2773.46	399.57	1486	10645.61***	(0.000)	2105.14***	(0.000)
M/B	5.81	3.01	3003	6.40	3.15	1517	5.22	2.86	1486	1.18	(0.554)	0.30***	(0.001)
Leverage	0.26	0.25	3003	0.26	0.30	1517	0.26	0.17	1486	0.00	(0.991)	0.13***	(0.000)
Cash Flows/Equity	0.04	0.05	3003	0.06	0.06	1517	0.02	0.05	1486	0.04***	(0.001)	0.01***	(0.000)
RUNUP	20.18%	12.63%	3003	17.85%	11.86%	1517	22.55%	13.62%	1486	-4.70%**	(0.018)	-1.77%*	(0.061)
Past Experience	6.95	4.00	3003	8.64	6.00	1517	5.22	3.00	1486	3.42***	(0.000)	3.00***	(0.000)
Panel C: Deal Characteristics													
Transaction Value ($ mil.)	896.10	160.40	3003	1452.69	339.50	1517	327.89	69.49	1486	1124.80***	(0.000)	270.01***	(0.000)
Relative Size	0.35	0.17	3003	0.33	0.16	1517	0.38	0.18	1486	-0.05*	(0.058)	-0.02***	(0.001)
Public	45.49%	–	3003	53.59%	–	1517	37.21%	–	1486	16.38%***	(0.000)	–	–
Private	32.30%	–	3003	23.27%	–	1517	41.52%	–	1486	-18.25%***	(0.000)	–	–
Subsidiary	22.21%	–	3003	23.14%	–	1517	21.27%	–	1486	1.87%	(0.217)	–	–
All Stock Deals	26.47%	–	3003	22.08%	–	1517	30.96%	–	1486	-8.87%***	(0.000)	–	–
All Cash Deals	36.23%	–	3003	40.41%	–	1517	31.97%	–	1486	8.44%***	(0.000)	–	–

Mixed Deals	37.30%	–	3003	37.51%	–	1517	37.08%	–	1486	0.43%	(0.808)	–	–
Hostile	1.10%	–	3003	1.85%	–	1517	0.34%	–	1486	1.51%***	(0.000)	–	–
Competing Bid	2.06%	–	3003	2.83%	–	1517	1.28%	–	1486	1.56%***	(0.003)	–	–
Tender Offer	15.88%	–	3003	19.51%	–	1517	12.18%	–	1486	7.33%***	(0.000)	–	–
Diversification	34.80%	–	3003	34.81%	–	1517	34.79%	–	1486	0.01%	(0.994)	–	–
Panel D: Market Characteristics													
M&A Heat Degree	1.47	1.43	3003	1.44	1.39	1517	1.50	1.50	1486	-0.06***	(0.000)	-0.11***	(0.000)
High Valuation Market	26.84%	–	3003	28.48%	–	1517	25.17%	–	1486	3.31%**	(0.041)	–	–
Low Valuation Market	25.57%	–	3003	28.35%	–	1517	22.75%	–	1486	5.60%***	(0.000)	–	–
Panel E: Financial Advisors													
Number of Advisors	1.14	1.00	3003	1.22	1.00	1517	1.06	1.00	1486	0.16***	(0.000)	0.00***	(0.000)
Total Advisory Fees ($ mil.)	4.15	1.58	523	6.37	3.48	254	2.06	0.85	269	4.31***	(0.000)	2.63***	(0.000)

Table 2.3 Summary statistics for the sample of deals advised by top-tier investment banks

This table presents summary statistics for the sample of deals advised by top-tier investment banks and univariate comparison between deals advised by single top-tier and multiple top-tier advisors. Panel A reports acquirer short- and long-term abnormal returns. CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around announcement. BHAR36 is the post-merger 36-month size-adjusted buy-and-hold abnormal returns. Panel B reports acquirer firm characteristics. MV is market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Panel C reports deal characteristics. Transaction Value is the value of the deal. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Private dummy equals one if the target is a private firm. Subsidiary dummy equals one if the target is a subsidiary firm. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Mixed dummy equals one if the deal is mixed paid by both stock and cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Time-to-completion is measured as the number of days between announcement and effective date. Bid premium, obtained from Thomson One Banker, is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement. Panel D reports market characteristics. M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. Panel E reports financial advisor related information. No. of advisors is the number of financial advisors retained by an acquirer. Acquirer total advisory fees, obtained from Thomson One Banker, is the total advisory fees paid by an acquirer to all the financial advisors retained. P-Values are shown in parentheses (the t-test and the Wilcoxon signed-rank test for the mean and median CAR [-2, 2], respectively; the bootstrapped skewness-adjusted t-statistic and the Wilcoxon signed-rank test for the mean and median BHAR36, respectively; the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	Top-Tier			Single Top-Tier			Multiple Top-Tier			Difference			
										Mean		Median	
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Abnormal Returns													
CAR[-2,2]	0.76%***	0.53%***	1517	0.69%**	0.53%***	1402	1.73%	0.51%	115	-1.04%	(0.344)	0.01%	(0.623)
	(0.004)	(0.001)		(0.012)	(0.003)		0.107	0.195					
BHAR36	-25.96%***	-37.31%***	1517	-25.25%***	-36.79%***	1402	-34.63%**	-41.11%***	115	9.37%	(0.148)	4.32%	(0.824)
	(0.000)	(0.000)		(0.000)	(0.000)		(0.025)	(0.000)					
Panel B: Firm Characteristics													
MV ($ mil.)	13419.07	2504.71	1517	12498.22	2372.46	1402	24645.40	6657.23	115	-12147.18***	(0.002)	-4284.77***	(0.000)
M/B	6.40	3.15	1517	6.57	3.21	1402	4.30	2.63	115	2.27	(0.178)	0.57**	(0.030)
Leverage	0.26	0.30	1517	0.25	0.29	1402	0.41	0.39	115	-0.16***	(0.008)	-0.10***	(0.000)
Cash Flows/Equity	0.06	0.06	1517	0.06	0.05	1402	0.08	0.07	115	-0.03**	(0.0460	-0.02***	(0.005)
RUNUP	17.85%	11.86%	1517	17.98%	11.33%	1402	16.30%	16.99%	115	1.68%	(0.646)	-5.66%	(0.527)
Past Experience	8.64	6.00	1517	8.50	6.00	1402	10.44	6.00	115	-1.95*	(0.091)	0.00	(0.170)
Panel C: Deal Characteristics													
Transaction Value ($ mil.)	1452.69	339.50	1517	1065.08	303.98	1402	6178.18	1500.00	115	-5113.10***	(0.000)	-1196.02***	(0.000)
Relative Size	0.33	0.16	1517	0.31	0.15	1402	0.60	0.31	115	-0.29***	(0.000)	-0.17***	(0.000)
Public	53.59%	–	1517	52.85%	–	1402	62.61%	–	115	-9.76%**	(0.041)	–	–
Private	23.27%	–	1517	24.04%	–	1402	13.91%	–	115	10.12%***	(0.004)	–	–
Subsidiary	23.14%	–	1517	23.11%	–	1402	23.48%	–	115	-0.37%	(0.929)	–	–
All Stock Deals	22.08%	–	1517	23.04%	–	1402	10.43%	–	115	12.60%***	(0.000)	–	–
All Cash Deals	40.41%	–	1517	40.66%	–	1402	37.39%	–	115	3.26%	(0.493)	–	–

Mixed Deals	37.51%	–	1517	36.31%	–	1402	52.17%	–	115	-15.87%***	(0.001)	–	–
Hostile	1.85%	–	1517	1.64%	–	1402	4.35%	–	115	-2.71%**	(0.038)	–	–
Competing Bid	2.83%	–	1517	2.57%	–	1402	6.09%	–	115	-3.52%	(0.125)	–	–
Tender Offer	19.51%	–	1517	19.19%	–	1402	23.48%	–	115	-4.29%	(0.298)	–	–
Diversification	34.81%	–	1517	35.95%	–	1402	20.87%	–	115	15.08%***	(0.000)	–	–
Panel D: Market Characteristics													
M&A Heat Degree	1.44	1.39	1517	1.45	1.41	1402	1.33	1.31	115	0.12***	(0.000)	0.09***	(0.000)
High Valuation Market	28.48%	–	1517	29.10%	–	1402	20.87%	–	115	8.23%**	(0.041)	–	–
Low Valuation Market	28.35%	–	1517	26.53%	–	1402	50.43%	–	115	-23.90%***	(0.000)	–	–
Panel E: Financial Advisors													
Number of Advisors	1.22	1.00	1517	1.13	1.00	1402	2.35	2.00	115	-1.22***	(0.000)	-1.00***	(0.000)
Total Advisory Fees ($ mil.)	6.37	3.48	254	5.14	3.00	237	23.62	18.50	17	-18.49***	(0.000)	-15.50***	(0.000)

Table 2.4 OLS regressions of acquirer short-term performance

This table presents results of OLS regressions of the acquirer short-term performance for the entire sample (Specifications 1 and 2), the sub-sample of public acquisitions (Specifications 3 and 4), the sub-sample of private acquisitions (Specifications 5 and 6), and the sub-sample of subsidiary acquisitions (Specifications 7 and 8). In these models this chapter regresses acquirer CAR [-2, 2] against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include firm, deal and market characteristics. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	All		Public		Private		Subsidiary	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Top-Tier	0.0029		0.0063		-0.0141*		0.0044	
	(0.478)		(0.258)		(0.078)		(0.609)	
Number of Top-Tier		0.0050		0.0083*		-0.0126*		0.0073
		(0.178)		(0.097)		(0.087)		(0.344)
Number of Advisors	-0.0029	-0.0052	-0.0022	-0.0063	0.0109	0.0133	-0.0163	-0.0195*
	(0.479)	(0.264)	(0.646)	(0.256)	(0.325)	(0.247)	(0.124)	(0.082)
In-House	0.0247**	0.0234**	0.0143	0.0110	0.0499**	0.0527**		
	(0.016)	(0.019)	(0.238)	(0.346)	(0.045)	(0.033)		
Ln(MV)	-0.0058***	-0.0061***	-0.0078***	-0.0082***	-0.0008	-0.0011	-0.0030	-0.0034
	(0.000)	(0.000)	(0.000)	(0.000)	(0.803)	(0.740)	(0.345)	(0.269)
M/B	0.0005	0.0005	0.0002	0.0002	0.0006	0.0006	-0.0003	-0.0003
	(0.237)	(0.227)	(0.747)	(0.724)	(0.385)	(0.376)	(0.789)	(0.804)
Leverage	0.0135*	0.0134*	0.0124	0.0125	0.0118	0.0120	0.0085	0.0081
	(0.066)	(0.068)	(0.259)	(0.256)	(0.410)	(0.404)	(0.504)	(0.528)
Cash Flows/Equity	0.0059	0.0058	0.0149	0.0149	0.0136	0.0138	0.0113	0.0114
	(0.731)	(0.735)	(0.512)	(0.513)	(0.645)	(0.640)	(0.787)	(0.786)
RUNUP	0.0010	0.0011	-0.0041	-0.0040	0.0027	0.0026	0.0092	0.0092
	(0.834)	(0.820)	(0.568)	(0.570)	(0.722)	(0.738)	(0.413)	(0.413)
Past Experience	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	-0.0005	-0.0005
	(0.576)	(0.550)	(0.794)	(0.756)	(0.781)	(0.727)	(0.276)	(0.286)
Relative Size	0.0149**	0.0146**	-0.0272***	-0.0272***	0.0792***	0.0784***	0.0423***	0.0419***
	(0.017)	(0.019)	(0.002)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)
Stock	-0.0034	-0.0034	-0.0104	-0.0102	0.0067	0.0069	-0.0285	-0.0281
	(0.514)	(0.525)	(0.142)	(0.149)	(0.483)	(0.471)	(0.131)	(0.137)
Cash	0.0134***	0.0135***	0.0194***	0.0193***	0.0101	0.0100	-0.0003	0.0000
	(0.001)	(0.001)	(0.003)	(0.003)	(0.210)	(0.214)	(0.967)	(0.999)
Hostile	-0.0151	-0.0156	-0.0056	-0.0065	-0.1871***	-0.1859***	-0.0272	-0.0295
	(0.225)	(0.207)	(0.671)	(0.619)	(0.000)	(0.000)	(0.305)	(0.264)
Competing Bid	-0.0274***	-0.0275***	-0.0192*	-0.0193*	-0.1049***	-0.1053***	-0.0425*	-0.0425*
	(0.009)	(0.009)	(0.057)	(0.056)	(0.000)	(0.000)	(0.082)	(0.066)
Tender Offer	0.0345***	0.0345***	0.0206***	0.0206***	-0.0861***	-0.0867***	0.0091	0.0079
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.654)	(0.692)
Diversification	-0.0036	-0.0034	-0.0093*	-0.0090*	-0.0065	-0.0066	0.0124*	0.0122*
	(0.337)	(0.355)	(0.071)	(0.082)	(0.367)	(0.359)	(0.086)	(0.089)
Public	-0.0392***	-0.0392***						
	(0.000)	(0.000)						
M&A Heat Degree	-0.0468	-0.0472	-0.0224	-0.0235	-0.0865	-0.0885	-0.0062	-0.0072
	(0.160)	(0.156)	(0.630)	(0.614)	(0.183)	(0.173)	(0.928)	(0.916)
High Valuation Market	-0.0073	-0.0073	-0.0092	-0.0092	-0.0179	-0.0177	0.0266*	0.0265*
	(0.350)	(0.349)	(0.332)	(0.337)	(0.310)	(0.314)	(0.097)	(0.097)
Low Valuation Market	0.0047	0.0046	0.0189	0.0189	-0.0093	-0.0092	0.0015	0.0014
	(0.609)	(0.612)	(0.158)	(0.159)	(0.531)	(0.536)	(0.947)	(0.949)
Constant	0.0953**	0.0990***	0.0692	0.0751	0.0542	0.0552	0.0659	0.0715
	(0.010)	(0.008)	(0.193)	(0.158)	(0.441)	(0.433)	(0.417)	(0.380)
N	3103	3103	1452	1452	984	984	667	667
R^2	0.090	0.091	0.144	0.145	0.107	0.107	0.125	0.126
adj. R^2	0.075	0.076	0.114	0.115	0.061	0.061	0.057	0.058

Table 2.5 OLS regressions of acquirer long-term performance

This table presents results of OLS regressions of the acquirer long-term performance for the entire sample (Specifications 1 and 2), the sub-sample of public acquisitions (Specifications 3 and 4), the sub-sample of private acquisitions (Specifications 5 and 6), and the sub-sample of subsidiary acquisitions (Specifications 7 and 8). In these models this chapter regresses acquirer BHAR36 against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include firm, deal and market characteristics. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	All		Public		Private		Subsidiary	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TopTier	0.1390***		0.1259**		0.2023**		0.0356	
	(0.001)		(0.040)		(0.014)		(0.625)	
No. of TopTier		0.1271***		0.1259**		0.1981***		0.0249
		(0.001)		(0.019)		(0.009)		(0.711)
No. of Advisors	-0.0841**	-0.1369***	-0.0467	-0.1071*	-0.1189	-0.1569**	-0.1785*	-0.1858*
	(0.025)	(0.001)	(0.299)	(0.051)	(0.120)	(0.049)	(0.063)	(0.058)
InHouse	0.0605	0.0004	0.1264	0.0634	-0.0739	-0.1092		
	(0.538)	(0.997)	(0.261)	(0.565)	(0.680)	(0.539)		
Ln(MV)	-0.0251	-0.0250	-0.0303	-0.0320	-0.0168	-0.0161	-0.0174	-0.0162
	(0.102)	(0.104)	(0.124)	(0.103)	(0.622)	(0.634)	(0.569)	(0.593)
M/B	-0.0078**	-0.0077**	-0.0054	-0.0052	-0.0068	-0.0069	-0.0104	-0.0104
	(0.015)	(0.016)	(0.227)	(0.245)	(0.156)	(0.148)	(0.159)	(0.160)
Leverage	0.1044	0.1034	0.0151	0.0164	0.1813	0.1802	0.0708	0.0706
	(0.182)	(0.186)	(0.898)	(0.889)	(0.160)	(0.163)	(0.608)	(0.611)
Cash Flows/Equity	0.4083**	0.4144**	0.3845	0.3921	-0.0387	-0.0436	1.1153***	1.1145***
	(0.018)	(0.017)	(0.151)	(0.143)	(0.889)	(0.875)	(0.000)	(0.000)
RUNUP	-0.1163**	-0.1176**	-0.1695***	-0.1719***	-0.0071	-0.0044	-0.2281**	-0.2291**
	(0.016)	(0.014)	(0.007)	(0.006)	(0.936)	(0.961)	(0.014)	(0.013)
Past Experience	0.0018	0.0017	0.0008	0.0008	0.0059	0.0054	0.0027	0.0026
	(0.365)	(0.385)	(0.717)	(0.698)	(0.231)	(0.269)	(0.679)	(0.686)
Relative Size	0.1043**	0.1056**	0.0700	0.0714	0.1843	0.1903	0.0843	0.0844
	(0.046)	(0.044)	(0.363)	(0.353)	(0.146)	(0.132)	(0.342)	(0.341)
Stock	-0.0581	-0.0577	-0.1237*	-0.1217	-0.0402	-0.0423	0.0332	0.0319
	(0.252)	(0.255)	(0.098)	(0.104)	(0.637)	(0.617)	(0.814)	(0.821)
Cash	0.0783**	0.0789**	0.0247	0.0245	0.1906***	0.1923***	-0.0143	-0.0152
	(0.035)	(0.034)	(0.673)	(0.676)	(0.008)	(0.007)	(0.847)	(0.838)
Hostile	0.3009*	0.2949*	0.2840*	0.2749*	-0.1581	-0.1692	0.8585***	0.8644***
	(0.055)	(0.062)	(0.086)	(0.098)	(0.444)	(0.409)	(0.000)	(0.000)
Competing Bid	-0.0947	-0.0990	-0.0703	-0.0720	-0.4211	-0.4231	-0.7435	-0.7431
	(0.400)	(0.375)	(0.537)	(0.525)	(0.169)	(0.166)	(0.403)	(0.400)
Tender Offer	0.0231	0.0233	0.0213	0.0212	-0.0631	-0.0525	-0.0793	-0.0754
	(0.637)	(0.634)	(0.693)	(0.695)	(0.738)	(0.783)	(0.911)	(0.916)
Diversification	-0.0066	-0.0051	-0.0033	0.0005	0.0314	0.0334	-0.0157	-0.0162
	(0.859)	(0.891)	(0.949)	(0.993)	(0.625)	(0.603)	(0.821)	(0.815)
Public	0.0576	0.0602						
	(0.158)	(0.139)						
M&A Heat Degree	0.0859	0.0804	0.1191	0.1027	-0.0339	-0.0010	-0.0676	-0.0647
	(0.755)	(0.770)	(0.741)	(0.775)	(0.949)	(0.998)	(0.918)	(0.921)
High Valuation Market	0.0494	0.0495	0.0445	0.0446	0.1405	0.1371	-0.0603	-0.0596
	(0.462)	(0.461)	(0.635)	(0.634)	(0.218)	(0.230)	(0.705)	(0.709)
Low Valuation Market	0.0388	0.0370	0.0127	0.0120	-0.1148	-0.1160	0.3902*	0.3902*
	(0.664)	(0.678)	(0.928)	(0.931)	(0.349)	(0.342)	(0.061)	(0.061)
Constant	-0.3122	-0.2614	-0.2382	-0.1611	-0.5518	-0.5540	0.2294	0.2269
	(0.325)	(0.409)	(0.562)	(0.697)	(0.355)	(0.352)	(0.778)	(0.780)
N	3103	3103	1452	1452	984	984	667	667
R^2	0.074	0.074	0.074	0.075	0.102	0.103	0.149	0.149
adj. R^2	0.059	0.059	0.042	0.043	0.056	0.057	0.083	0.082

Table 2.6 Bivariate probit model of making in-house deals and the retention of top-tier advisors

This table presents results of bivariate probit model of making in-house deals and the retention of top-tier advisors. In the model this chapter regresses the decisions on making in-house deals and the retention of top-tier advisors against firm, deal and market characteristics. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1) In-House	(2) Top-Tier
Ln(MV)	-0.2403***	0.4139***
	(0.000)	(0.000)
M/B	0.0183**	-0.0088*
	(0.036)	(0.058)
Leverage	-0.2654	-0.0787
	(0.326)	(0.460)
Cash Flows/Equity	0.3557	0.5408**
	(0.587)	(0.018)
Past Experience	0.0242***	-0.0191***
	(0.000)	(0.000)
RUNUP	-0.1460	-0.1443**
	(0.384)	(0.014)
Relative Size	-3.8353***	0.5597***
	(0.000)	(0.000)
Stock	0.1479	-0.1315*
	(0.371)	(0.071)
Cash	-0.0473	-0.0811
	(0.817)	(0.204)
Hostile	-4.5719***	0.6236**
	(0.000)	(0.037)
Competing Bid	0.5420	-0.0419
	(0.258)	(0.838)
Tender Offer	-0.4991**	0.1277
	(0.017)	(0.162)
Diversification	-0.0344	-0.1036*
	(0.787)	(0.055)
Public	1.1349***	0.0017
	(0.000)	(0.978)
M&A Heat Degree	1.2947*	-0.0144
	(0.064)	(0.974)
High Valuation Market	-0.1786	-0.0146
	(0.364)	(0.880)
Low Valuation Market	1.0497***	-0.0663
	(0.009)	(0.629)
Scope	0.0028	0.1953***
	(0.969)	(0.000)
Constant	-2.0454**	-3.0591***
	(0.013)	(0.000)
N	3103	3103

Table 2.7 OLS regressions of acquirer long-term performance – large acquirers versus small acquirers

This table presents results of OLS regressions of the acquirer long-term performance for the sub-sample of small acquirers (Specifications 1 and 2), and the sub-sample of large acquirers (Specifications 3 and 4). In these models this chapter regresses acquirer BHAR36 against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include firm, deal and market characteristics. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Small Acquirer		Large Acquirer	
	(1)	(2)	(3)	(4)
TopTier	0.1842***		0.1455***	
	(0.007)		(0.003)	
No. of TopTier		0.1699**		0.1125***
		(0.013)		(0.007)
No. of Advisors	-0.2120**	-0.2245***	-0.0189	-0.0770*
	(0.010)	(0.007)	(0.609)	(0.092)
InHouse	-0.1188	-0.1371	0.1403	0.0591
	(0.544)	(0.485)	(0.191)	(0.586)
Ln(MV)	-0.1473***	-0.1463***	0.0416*	0.0424*
	(0.000)	(0.000)	(0.061)	(0.057)
M/B	-0.0072	-0.0072	-0.0095**	-0.0094**
	(0.233)	(0.239)	(0.013)	(0.013)
Leverage	0.1869*	0.1844	-0.0156	-0.0175
	(0.099)	(0.104)	(0.873)	(0.857)
Cash Flows/Equity	0.4616**	0.4644**	0.7382**	0.7565**
	(0.023)	(0.022)	(0.016)	(0.014)
RUNUP	-0.0825	-0.0829	-0.1357**	-0.1398**
	(0.211)	(0.208)	(0.023)	(0.019)
Past Experience	0.0053	0.0053	-0.0028	-0.0029
	(0.392)	(0.393)	(0.160)	(0.142)
Relative Size	0.0784	0.0752	0.0262	0.0318
	(0.249)	(0.273)	(0.726)	(0.672)
Stock	-0.0554	-0.0573	-0.0947	-0.0918
	(0.431)	(0.415)	(0.196)	(0.207)
Cash	0.1355**	0.1337**	-0.0144	-0.0133
	(0.030)	(0.032)	(0.760)	(0.779)
Hostile	0.6607	0.6631	0.1939	0.1927
	(0.146)	(0.147)	(0.252)	(0.260)
Competing Bid	-0.2041	-0.2023	-0.0125	-0.0172
	(0.346)	(0.350)	(0.918)	(0.887)
Tender Offer	0.0728	0.0739	-0.0268	-0.0282
	(0.458)	(0.452)	(0.609)	(0.589)
Diversification	-0.0440	-0.0457	0.0302	0.0333
	(0.408)	(0.390)	(0.532)	(0.495)
Public	0.1100*	0.1129*	-0.0222	-0.0186
	(0.099)	(0.090)	(0.649)	(0.701)
M&A Heat Degree	0.1117	0.1140	0.1797	0.1654
	(0.812)	(0.808)	(0.566)	(0.598)
High Valuation Market	0.0611	0.0594	0.0503	0.0515
	(0.595)	(0.605)	(0.526)	(0.517)
Low Valuation Market	0.0697	0.0670	-0.0001	-0.0013
	(0.615)	(0.628)	(1.000)	(0.991)
Constant	0.4434	0.4589	-1.0212***	-0.9456**
	(0.423)	(0.406)	(0.007)	(0.012)
N	1551	1551	1552	1552
R2	0.097	0.097	0.107	0.105
adj. R2	0.067	0.067	0.077	0.075

Table 2.8 OLS regressions of acquirer long-term performance – low cash flows-to-equity acquirers versus high cash flows-to-equity acquirers

This table presents results of OLS regressions of the acquirer long-term performance for the sub-sample of low cash flows-to-equity acquirers (Specifications 1 and 2), and the sub-sample of high cash flows-to-equity acquirers (Specifications 3 and 4). In these models this chapter regresses acquirer BHAR36 against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include firm, deal and market characteristics. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Low Cash Flows/Equity		Large Cash Flows/Equity	
	(1)	(2)	(3)	(4)
TopTier	0.1453**		0.1172**	
	(0.017)		(0.040)	
No. of TopTier		0.1393**		0.1015**
		(0.011)		(0.044)
No. of Advisors	-0.1678***	-0.2232***	-0.0310	-0.0739
	(0.002)	(0.000)	(0.534)	(0.192)
InHouse	-0.1104	-0.1713	0.2144	0.1633
	(0.398)	(0.190)	(0.172)	(0.296)
Ln(MV)	0.0143	0.0131	-0.0370*	-0.0358*
	(0.531)	(0.570)	(0.078)	(0.082)
M/B	-0.0058*	-0.0058*	-0.0120	-0.0117
	(0.085)	(0.087)	(0.122)	(0.127)
Leverage	0.0950	0.0918	0.0212	0.0223
	(0.367)	(0.385)	(0.850)	(0.842)
Cash Flows/Equity	-0.4739**	-0.4672*	1.3848***	1.3855***
	(0.048)	(0.052)	(0.001)	(0.001)
RUNUP	-0.0569	-0.0563	-0.0372	-0.0412
	(0.358)	(0.364)	(0.622)	(0.584)
Past Experience	0.0011	0.0011	0.0026	0.0024
	(0.719)	(0.716)	(0.296)	(0.325)
Relative Size	0.0335	0.0299	0.0849	0.0880
	(0.657)	(0.694)	(0.204)	(0.189)
Stock	-0.0303	-0.0290	-0.0723	-0.0731
	(0.666)	(0.679)	(0.331)	(0.325)
Cash	0.1045*	0.1068*	0.0533	0.0526
	(0.059)	(0.054)	(0.277)	(0.284)
Hostile	0.8164**	0.8156**	0.1515	0.1460
	(0.048)	(0.049)	(0.356)	(0.378)
Competing Bid	-0.3324**	-0.3367**	-0.0694	-0.0733
	(0.040)	(0.037)	(0.617)	(0.595)
Tender Offer	0.0055	0.0063	0.0004	0.0002
	(0.941)	(0.933)	(0.995)	(0.997)
Diversification	-0.0226	-0.0208	0.0112	0.0122
	(0.673)	(0.697)	(0.814)	(0.799)
Public	0.0664	0.0690	0.0480	0.0507
	(0.231)	(0.212)	(0.396)	(0.369)
M&A Heat Degree	-0.0414	-0.0541	0.0807	0.0820
	(0.915)	(0.889)	(0.848)	(0.846)
High Valuation Market	0.1058	0.1113	-0.0099	-0.0141
	(0.252)	(0.228)	(0.919)	(0.886)
Low Valuation Market	-0.0966	-0.1012	0.1279	0.1291
	(0.409)	(0.383)	(0.333)	(0.330)
Constant	-0.3844	-0.3264	-0.3704	-0.3347
	(0.388)	(0.464)	(0.460)	(0.505)
N	1551	1551	1552	1552
R^2	0.098	0.098	0.083	0.082
adj. R^2	0.069	0.069	0.052	0.052

Table 2.9 IV (2SLS) regressions of short-term performance

This table presents results of IV (2SLS) regressions of the acquirer short-term performance for deals advised by investment banks. In these models this chapter regresses acquirer CAR [-2, 2] against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. The instrument variable is the Scope. Scope equals three if an acquirer retained top-tier advisors for all the three types of transactions (M&A, equity issue and bond issue) during 5-year period prior to the acquisition. Scope equals two if an acquirer retained top-tier advisors for two of the three types of transactions during 5-year period prior to the acquisition. Scope equals one if an acquirer retained top-tier advisors for only one of the three types of transactions during 5-year period prior to the acquisition. Scope equals zero if an acquirer never retain top-tier advisors during 5-year period prior to the acquisition. Other control variables include No. of Advisors, firm, deal and market characteristics. No. of Advisors equals the number of advisors retained by the acquirer. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)		(2)	
	First Stage	**Second Stage**	**First Stage**	**Second Stage**
TopTier		0.0027		
		(0.932)		
No. of TopTier				0.0024
				(0.932)
No. of Advisors	0.0878***	-0.0030	0.5110***	-0.0040
	(0.000)	(0.555)	(0.000)	(0.796)
Ln(MV)	0.1270***	-0.0056	0.1376***	-0.0056
	(0.000)	(0.222)	(0.000)	(0.217)
M/B	-0.0015	0.0005	-0.0025	0.0005
	(0.329)	(0.231)	(0.149)	(0.235)
Leverage	-0.0374	0.0134*	-0.0330	0.0133*
	(0.308)	(0.073)	(0.422)	(0.075)
Cash Flows/Equity	0.1574**	0.0054	0.1228	0.0055
	(0.013)	(0.761)	(0.108)	(0.752)
RUNUP	-0.0507***	0.0004	-0.0441**	0.0003
	(0.005)	(0.942)	(0.027)	(0.945)
Past Experience	-0.0038***	0.0001	-0.0034**	0.0001
	(0.000)	(0.575)	(0.011)	(0.567)
Relative Size	0.1428***	0.0153**	0.1464***	0.0153**
	(0.000)	(0.041)	(0.000)	(0.037)
Stock	-0.0312	-0.0051	-0.0369	-0.0051
	(0.173)	(0.349)	(0.142)	(0.351)
Cash	-0.0176	0.0131***	-0.0244	0.0131***
	(0.405)	(0.002)	(0.300)	(0.002)
Hostile	0.1151*	-0.0160	0.1725**	-0.0161
	(0.069)	(0.219)	(0.017)	(0.232)
Competing Bid	-0.0481	-0.0300***	-0.0170	-0.0301***
	(0.372)	(0.005)	(0.801)	(0.004)
Tender Offer	0.0326	0.0361***	0.0350	0.0361***
	(0.253)	(0.000)	(0.271)	(0.000)
Diversification	-0.0291*	-0.0038	-0.0442**	-0.0038
	(0.096)	(0.322)	(0.021)	(0.336)
Public	0.0152	-0.0395***	-0.0041	-0.0395***
	(0.464)	(0.000)	(0.857)	(0.000)
M&A Heat Degree	0.0038	-0.0444	0.0464	-0.0445
	(0.978)	(0.201)	(0.772)	(0.200)
High Valuation Market	0.0015	-0.0079	0.0001	-0.0079
	(0.961)	(0.324)	(0.997)	(0.324)
Low Valuation Market	-0.0106	0.0047	0.0026	0.0046
	(0.809)	(0.610)	(0.957)	(0.612)
Scope	0.0649***		0.0712***	
	(0.000)		(0.000)	
Constant	-0.5985***	0.0908**	-1.0501***	0.0918*
	(0.000)	(0.038)	(0.000)	(0.068)
N	3003	3003	3003	3003
R^2	0.300	0.093	0.432	0.094
adj. R^2	0.289	0.078	0.423	0.079

Table 2.10 IV (2SLS) regressions of long-term performance

This table presents results of IV (2SLS) regressions of the acquirer long-term performance for deals advised by investment banks. In these models this chapter regresses acquirer BHAR36 against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. The instrument variable is the Scope. Scope equals three if an acquirer retained top-tier advisors for all the three types of transactions (M&A, equity issue and bond issue) during 5-year period prior to the acquisition. Scope equals two if an acquirer retained top-tier advisors for two of the three types of transactions during 5-year period prior to the acquisition. Scope equals one if an acquirer retained top-tier advisors for only one of the three types of transactions during 5-year period prior to the acquisition. Scope equals zero if an acquirer never retain top-tier advisors during 5-year period prior to the acquisition. Other control variables include No. of Advisors, firm, deal and market characteristics. No. of Advisors equals the number of advisors retained by the acquirer. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)		(2)	
	First Stage	**Second Stage**	**First Stage**	**Second Stage**
Top-Tier		0.4715*		
		(0.082)		
Number of Top-Tier				0.4295*
				(0.082)
Number of Advisors	0.0878***	-0.1126**	0.5110***	-0.2907**
	(0.000)	(0.011)	(0.000)	(0.025)
Ln(MV)	0.1270***	-0.0736*	0.1376***	-0.0729*
	(0.000)	(0.070)	(0.000)	(0.071)
M/B	-0.0015	-0.0065*	-0.0025	-0.0062*
	(0.329)	(0.051)	(0.149)	(0.065)
Leverage	-0.0374	0.1017	-0.0330	0.0983
	(0.308)	(0.200)	(0.422)	(0.216)
Cash Flows/Equity	0.1574**	0.3582**	0.1228	0.3796**
	(0.013)	(0.044)	(0.108)	(0.032)
RUNUP	-0.0507***	-0.0991*	-0.0441**	-0.1041**
	(0.005)	(0.050)	(0.027)	(0.037)
Past Experience	-0.0038***	0.0039	-0.0034**	0.0035
	(0.000)	(0.103)	(0.011)	(0.128)
Relative Size	0.1428***	0.0586	0.1464***	0.0630
	(0.000)	(0.386)	(0.000)	(0.345)
Stock	-0.0312	-0.0505	-0.0369	-0.0493
	(0.173)	(0.348)	(0.142)	(0.358)
Cash	-0.0176	0.0799**	-0.0244	0.0821**
	(0.405)	(0.039)	(0.300)	(0.036)
Hostile	0.1151*	0.2591*	0.1725**	0.2392
	(0.069)	(0.088)	(0.017)	(0.131)
Competing Bid	-0.0481	-0.1147	-0.0170	-0.1301
	(0.372)	(0.314)	(0.801)	(0.244)
Tender Offer	0.0326	0.0188	0.0350	0.0192
	(0.253)	(0.718)	(0.271)	(0.710)
Diversification	-0.0291*	0.0023	-0.0442**	0.0075
	(0.096)	(0.953)	(0.021)	(0.847)
Public	0.0152	0.0490	-0.0041	0.0579
	(0.464)	(0.247)	(0.857)	(0.163)
M&A Heat Degree	0.0038	0.0252	0.0464	0.0070
	(0.978)	(0.932)	(0.772)	(0.981)
High Valuation Market	0.0015	0.0698	0.0001	0.0704
	(0.961)	(0.316)	(0.997)	(0.314)
Low Valuation Market	-0.0106	0.0548	0.0026	0.0487
	(0.809)	(0.547)	(0.957)	(0.593)
Scope	0.0649***		0.0712***	
	(0.000)		(0.000)	
Constant	-0.5985***	-0.0330	-1.0501***	0.1357
	(0.000)	(0.929)	(0.000)	(0.747)
N	3003	3003	3003	3003
R^2	0.300	0.047	0.432	0.047
adj. R^2	0.289	0.031	0.423	0.032

Table 2.11 Robustness tests – acquirer short-term performance

This table presents results of robustness tests of the acquirer short-term performance for the entire sample. In these models this chapter regresses acquirer short-term performance against a vector of explanatory variables. Specifications 1 and 2 show the regressions of market-adjusted CAR [-1, 1]. Specifications 3 and 4 show the regressions of market-adjusted CAR [-5, 5]. Specifications 5 and 6 show the regressions of CAR [-2, 2] estimated by the market model. Specifications 7 and 8 show the regressions of CAR [-2, 2] estimated by the Fama-French three-factor model. Specification 9 and 10 show the regressions of CAR [-2, 2] estimated by the Fama-French-momentum four-factor model. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include firm, deal and market characteristics. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Market-adjusted CAR [-1, 1]		Market-adjusted CAR [-5, 5]		Market Model CAR [-2, 2]		Fama-French CAR [-2, 2]		Fama-French-momentum CAR [-2, 2]	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Top-Tier	0.0014		0.0028		0.0034		0.0036		0.0031	
	(0.705)		(0.569)		(0.406)		(0.376)		(0.446)	
Number of Top-Tier		0.0032		0.0057		0.0054		0.0057		0.0049
		(0.344)		(0.198)		(0.139)		(0.126)		(0.198)
Number of Advisors	-0.0025	-0.0040	-0.0020	-0.0047	-0.0036	-0.0061	-0.0039	-0.0065	-0.0043	-0.0065
	(0.534)	(0.366)	(0.662)	(0.378)	(0.386)	(0.192)	(0.366)	(0.172)	(0.332)	(0.180)
In-House	0.0178*	0.0171*	0.0427***	0.0414***	0.0230**	0.0215**	0.0243**	0.0227**	0.0231**	0.0217**
	(0.059)	(0.063)	(0.002)	(0.002)	(0.026)	(0.033)	(0.016)	(0.021)	(0.027)	(0.034)
Ln(MV)	-0.0069***	-0.0072***	-0.0057***	-0.0061***	-0.0059***	-0.0062***	-0.0062***	-0.0065***	-0.0060***	-0.0063***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
M/B	0.0005	0.0005	0.0003	0.0003	0.0003	0.0003	0.0005	0.0005	0.0005	0.0005
	(0.165)	(0.158)	(0.561)	(0.542)	(0.405)	(0.390)	(0.245)	(0.233)	(0.267)	(0.257)
Leverage	0.0095	0.0094	0.0131	0.0130	0.0118*	0.0117*	0.0137*	0.0136*	0.0144**	0.0143**
	(0.159)	(0.161)	(0.142)	(0.146)	(0.097)	(0.099)	(0.055)	(0.057)	(0.046)	(0.047)
Cash Flows/Equity	-0.0074	-0.0075	0.0191	0.0190	0.0035	0.0035	0.0059	0.0059	0.0043	0.0043
	(0.649)	(0.645)	(0.394)	(0.397)	(0.838)	(0.841)	(0.730)	(0.732)	(0.807)	(0.809)
RUNUP	0.0034	0.0035	0.0023	0.0024	-0.0201***	-0.0200***	-0.0167***	-0.0167***	-0.0155***	-0.0154***
	(0.410)	(0.398)	(0.709)	(0.694)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
Past Experience	0.0004**	0.0004**	-0.0001	-0.0001	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002
	(0.012)	(0.011)	(0.581)	(0.611)	(0.338)	(0.319)	(0.208)	(0.193)	(0.293)	(0.278)
Relative Size	0.0131**	0.0128**	0.0209***	0.0205***	0.0148**	0.0146**	0.0137**	0.0134**	0.0147**	0.0145**
	(0.021)	(0.023)	(0.002)	(0.003)	(0.017)	(0.020)	(0.021)	(0.023)	(0.014)	(0.015)

Stock	-0.0079*	-0.0078*	-0.0026	-0.0025	-0.0038	-0.0037	-0.0051	-0.0050	-0.0043	-0.0042
	(0.091)	(0.094)	(0.690)	(0.703)	(0.469)	(0.479)	(0.342)	(0.351)	(0.432)	(0.440)
Cash	0.0148***	0.0149***	0.0100**	0.0101**	0.0135***	0.0136***	0.0136***	0.0137***	0.0145***	0.0145***
	(0.000)	(0.000)	(0.049)	(0.047)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)
Hostile	-0.0100	-0.0104	-0.0178	-0.0184	-0.0173	-0.0179	-0.0215*	-0.0221*	-0.0186	-0.0191
	(0.372)	(0.351)	(0.193)	(0.177)	(0.159)	(0.144)	(0.075)	(0.066)	(0.135)	(0.124)
Competing Bid	-0.0176*	-0.0176*	-0.0311**	-0.0312**	-0.0246**	-0.0247**	-0.0285***	-0.0287***	-0.0277***	-0.0278***
	(0.056)	(0.055)	(0.031)	(0.030)	(0.017)	(0.016)	(0.003)	(0.003)	(0.006)	(0.005)
Tender Offer	0.0323***	0.0323***	0.0371***	0.0370***	0.0348***	0.0347***	0.0344***	0.0343***	0.0354***	0.0353***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Diversification	-0.0055*	-0.0054	-0.0034	-0.0033	-0.0030	-0.0029	-0.0021	-0.0019	-0.0013	-0.0012
	(0.099)	(0.105)	(0.457)	(0.479)	(0.413)	(0.434)	(0.566)	(0.592)	(0.731)	(0.755)
Public	-0.0333***	-0.0333***	-0.0368***	-0.0368***	-0.0387***	-0.0386***	-0.0386***	-0.0386***	-0.0383***	-0.0382***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
M&A Heat Degree	-0.0304	-0.0307	-0.0698*	-0.0702*	-0.0341	-0.0344	-0.0409	-0.0413	-0.0445	-0.0448
	(0.315)	(0.311)	(0.085)	(0.083)	(0.308)	(0.302)	(0.213)	(0.209)	(0.182)	(0.179)
High Valuation Market	-0.0050	-0.0050	-0.0054	-0.0054	-0.0087	-0.0087	-0.0030	-0.0030	-0.0039	-0.0039
	(0.474)	(0.473)	(0.568)	(0.567)	(0.249)	(0.249)	(0.694)	(0.693)	(0.616)	(0.615)
Low Valuation Market	0.0033	0.0033	0.0180	0.0180	0.0053	0.0053	0.0010	0.0009	-0.0002	-0.0003
	(0.685)	(0.687)	(0.101)	(0.102)	(0.551)	(0.555)	(0.909)	(0.914)	(0.979)	(0.976)
Constant	0.0903***	0.0929***	0.1186***	0.1231***	0.0893**	0.0932**	0.0934**	0.0974***	0.0965**	0.0999***
	(0.008)	(0.006)	(0.009)	(0.007)	(0.016)	(0.012)	(0.011)	(0.008)	(0.010)	(0.008)
N	3103	3103	3103	3103	3103	3103	3103	3103	3103	3103
R^2	0.103	0.103	0.071	0.071	0.109	0.109	0.109	0.109	0.105	0.105
adj. R^2	0.088	0.088	0.056	0.056	0.094	0.094	0.094	0.094	0.090	0.091

Table 2.12 Robustness tests – acquirer long-term performance

This table presents results of robustness tests of the acquirer long-term performance for the entire sample. In these models this chapter regresses acquirer long-term performance against a vector of explanatory variables. Specifications 1 and 2 show the regressions of size-adjusted BHAR12. Specifications 3 and 4 show the regressions of size-adjuested BHAR24. Specifications 5 and 6 show the regressions of market-adjusted BHAR36. Specifications 7 and 8 show the regressions of size-adjusted BHAR36 estimated by the alternative equation ($BHAR_{i,T_1,T_2} = \prod_{t=T_1}^{T_2}(1 + R_{it}) - 1 - R_{pt}$, where $R_{pt} = \sum_{j=1}^{n} \frac{\prod_{t=T_1}^{T_2}(1+R_{jt})-1}{n}$). The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include firm, deal and market characteristics. For firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. For market characteristics, M&A Heat Degree is measured as the moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985. High Valuation Market dummy equals one if a deal is conducted during the period of high valuation market. Low Valuation Market equals one if a deal is conducted during the period of low valuation market. All continuous variables are winsorized at the 1% and 99% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroscedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Size-adjusted BHAR12		Size-adjusted BHAR24		Market-adjusted BHAR36		Size-adjusted (alternative equation) BHAR36	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Top-Tier	0.0416*		0.0810***		0.1581***		0.1498***	
	(0.051)		(0.009)		(0.001)		(0.001)	
Number of Top-Tier		0.0440**		0.0887***		0.1386***		0.1308***
		(0.022)		(0.001)		(0.001)		(0.001)
Number of Advisors	-0.0330*	-0.0519**	-0.0735**	-0.1118***	-0.0889**	-0.1459***	-0.0708*	-0.1245***
	(0.090)	(0.016)	(0.013)	(0.000)	(0.030)	(0.002)	(0.074)	(0.006)
In-House	0.0294	0.0113	0.1053	0.0701	0.0277	-0.0407	0.0654	0.0006
	(0.728)	(0.893)	(0.258)	(0.449)	(0.810)	(0.724)	(0.563)	(0.996)
Ln(MV)	-0.0116	-0.0125	-0.0147	-0.0168	-0.0191	-0.0180	-0.0034	-0.0023
	(0.134)	(0.109)	(0.201)	(0.143)	(0.247)	(0.272)	(0.836)	(0.887)
M/B	-0.0044**	-0.0044**	-0.0099***	-0.0098***	-0.0030	-0.0029	0.0000	0.0001
	(0.031)	(0.033)	(0.000)	(0.000)	(0.339)	(0.354)	(0.996)	(0.975)
Leverage	0.1401***	0.1396***	0.1187*	0.1176*	0.0907	0.0897	0.0995	0.0986
	(0.002)	(0.002)	(0.069)	(0.071)	(0.283)	(0.289)	(0.249)	(0.253)
Cash Flows/Equity	0.1282	0.1295	0.3160**	0.3183**	0.3831**	0.3905**	0.3956**	0.4027**
	(0.235)	(0.230)	(0.017)	(0.016)	(0.034)	(0.031)	(0.027)	(0.024)
RUNUP	-0.0509*	-0.0510*	-0.0851**	-0.0852**	-0.1313***	-0.1332***	-0.1036**	-0.1054**
	(0.056)	(0.055)	(0.021)	(0.020)	(0.009)	(0.008)	(0.042)	(0.039)
Past Experience	-0.0002	-0.0002	-0.0003	-0.0003	-0.0012	-0.0014	-0.0007	-0.0008
	(0.890)	(0.889)	(0.841)	(0.845)	(0.561)	(0.520)	(0.748)	(0.706)
Relative Size	0.0197	0.0193	0.0478	0.0466	0.0507	0.0530	0.0441	0.0463
	(0.478)	(0.487)	(0.230)	(0.243)	(0.383)	(0.363)	(0.433)	(0.411)

Stock	-0.0184	-0.0181	-0.0408	-0.0401	-0.0293	-0.0291	-0.0270	-0.0268
	(0.518)	(0.525)	(0.284)	(0.292)	(0.604)	(0.606)	(0.615)	(0.617)
Cash	0.0697***	0.0700***	0.0838***	0.0845***	0.0822**	0.0827**	0.0923**	0.0928**
	(0.001)	(0.001)	(0.004)	(0.004)	(0.045)	(0.044)	(0.023)	(0.023)
Hostile	0.0363	0.0334	0.2182**	0.2120*	0.2380	0.2323	0.1786	0.1733
	(0.604)	(0.632)	(0.048)	(0.055)	(0.142)	(0.156)	(0.323)	(0.341)
Competing Bid	-0.0509	-0.0522	-0.0200	-0.0225	-0.0168	-0.0217	-0.0338	-0.0385
	(0.364)	(0.349)	(0.818)	(0.794)	(0.895)	(0.863)	(0.788)	(0.758)
Tender Offer	-0.0162	-0.0164	0.0004	0.0000	0.0411	0.0415	0.0124	0.0127
	(0.573)	(0.570)	(0.992)	(1.000)	(0.452)	(0.448)	(0.821)	(0.816)
Diversification	-0.0292	-0.0285	-0.0279	-0.0264	-0.0099	-0.0084	-0.0199	-0.0186
	(0.138)	(0.148)	(0.309)	(0.337)	(0.813)	(0.841)	(0.624)	(0.649)
Public	0.0550**	0.0557**	0.0612**	0.0627**	0.0529	0.0558	0.0381	0.0409
	(0.016)	(0.015)	(0.049)	(0.043)	(0.238)	(0.211)	(0.384)	(0.348)
M&A Heat Degree	0.0878	0.0855	0.0145	0.0098	0.2286	0.2228	0.0917	0.0863
	(0.654)	(0.663)	(0.948)	(0.964)	(0.421)	(0.432)	(0.744)	(0.759)
High Valuation Market	-0.0315	-0.0315	0.0228	0.0228	-0.0792	-0.0790	-0.0185	-0.0183
	(0.470)	(0.470)	(0.695)	(0.696)	(0.275)	(0.276)	(0.791)	(0.794)
Low Valuation Market	-0.0396	-0.0402	-0.0674	-0.0685	0.0404	0.0383	0.0173	0.0153
	(0.389)	(0.381)	(0.311)	(0.303)	(0.681)	(0.697)	(0.861)	(0.877)
Constant	-0.0806	-0.0587	-0.0739	-0.0281	-0.1048	-0.0537	-0.3512	-0.3034
	(0.702)	(0.781)	(0.772)	(0.912)	(0.756)	(0.873)	(0.279)	(0.351)
N	3103	3103	3103	3103	3103	3103	3103	3103
R2	0.054	0.054	0.082	0.083	0.070	0.070	0.047	0.046
adj. R2	0.038	0.039	0.066	0.068	0.055	0.055	0.031	0.031

Appendix 2.1: Top 25 U.S. financial advisor ranking based on transaction value

The table presents the ranking of the top-25 financial advisors based on the transaction value for acquisitions of U.S. targets over the period January 1990 to December 31, 2009 obtained from the Thomson One Banker. Panel A and Panel B present the financial advisor ranking in the two decades – 1990s and 2000s, respectively. Transaction value is shown in U.S. million dollars.

Rank	Financial Advisor	Transaction Value	Number of Deals
	Panel A: 1990 – 1999		
	Top-Tier		
1	Goldman Sachs & Co	2,108,483.06	1,601
2	Bank of America Merrill Lynch	1,756,874.86	2,153
3	Morgan Stanley	1,669,074.77	1,338
4	JP Morgan	1,366,348.57	1,691
5	Credit Suisse	1,342,830.48	2,010
6	Citi (Salomon Brother/Salomon Smith Barney)	1,192,974.73	1,676
7	Barclays Capital (Lehman Brothers)	698,713.29	874
8	Lazard	613,378.80	568
9	UBS	435,536.00	1,018
10	Deutsche Bank AG	369,381.67	969
	Non-Top-Tier		
11	Sagent Advisors Inc	240,950.63	183
12	Commerzbank AG	233,242.03	326
13	Allen & Co Inc	121,159.69	50
14	Houlihan Lokey	111,308.94	390
15	Gleacher & Co Inc	92,671.86	78
16	Blackstone Group LP	69,979.81	142
17	RBC Capital Markets	65,626.50	495
18	Evercore Partners	63,025.41	11
19	Societe Generale	59,085.45	103
20	Greenhill & Co, LLC	59,037.24	30
21	Rothschild	57,591.51	88
22	RBS	49,244.64	341
23	Keefe Bruyette & Woods Inc	43,877.64	233
24	CIBC World Markets Inc	43,771.35	205
25	Jefferies & Co Inc	42,621.50	544
	Panel B: 2000 – 2009		
	Top-Tier		
1	Goldman Sachs & Co	4,130,646.38	1,653
2	Morgan Stanley	3,069,775.38	1,299
3	Bank of America Merrill Lynch	3,025,483.53	1,931
4	JP Morgan	2,978,195.31	1,810
5	Citi (Salomon Smith Barney)	2,511,363.84	1,490
6	Credit Suisse	1,940,924.74	1,697
7	Barclays Capital (Lehman Brothers)	1,869,741.79	1,008
8	UBS	1,178,542.38	924
9	Lazard	1,002,150.94	843
10	Deutsche Bank AG	938,850.17	634

	Non-Top-Tier		
11	Evercore Partners	681,438.52	173
12	Wells Fargo & Co	381,847.10	477
13	Commerzbank AG	356,887.07	138
14	Houlihan Lokey	354,513.98	1,375
15	Blackstone Group LP	304,486.73	127
16	Greenhill & Co, LLC	242,046.54	117
17	Sagent Advisors Inc	206,566.20	230
18	Jefferies & Co Inc	193,171.26	858
19	Rothschild	188,233.09	239
20	Duff and Phelps	184,790.02	457
21	BNP Paribas SA	174,201.15	42
22	Centerview Partners LLC	169,952.29	29
23	Moelis & Co	135,365.04	76
24	Keefe Bruyette & Woods Inc	134,706.73	443
25	Sandler O'Neill Partners	125,961.47	403

Appendix 2.2: Definitions of control variables

This table describes control variables in the regressions of this chapter. The definition for each variable is shown in the table. Panel A, B and C present firm characteristics, deal characteristics and market characteristics, respectively.

Variable	Definition
Panel A: Firm Characteristics	
Ln(MV)	The logarithm of the acquirer market value measured 4 weeks before the announcement (CRSP item PRC×SHROUT).
M/B	Market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT) divided by book value of equity at the fiscal year end before the announcement (Compustat item CEQ).
Leverage	Total debt over total capital at the fiscal year end before the announcement (Compustat item (DTLL+DLC)/(DLTT+DLC+SEQ)).
Cash Flows/Equity	Cash flows at the fiscal year end before the announcement (Compustat item IB+DP-DVP-DVC) divided by market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT).
RUNUP	Acquirer market-adjusted CARs before announcement date over the [-365, -28] window.
Past Experience	The number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question.
Panel B: Deal Characteristics	
Relative Size	Transaction value (from Thomson One Banker) divided by the acquirer market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT).
Public	Dummy variable equals one if the target is a publicly listed firm.
Stock	Dummy variable equals one if the deal is 100% paid by stock.
Cash	Dummy variable equals one if the deal is 100% paid by cash.
Hostile	Dummy variable equals one if the deal attitude is identified as hostile or unsolicited by Thomson One Banker.
Competing Bid	Dummy variable equals one if there are more than one bidding firms reported by Thomson One Banker.
Tender Offer	Dummy variable equals one if the deal is identified as a tender offer by Thomson One Banker.
Diversification	Dummy variable equals one if the acquirer and the target have the different first two-digit of primary SIC code.
Panel C: Market Characteristics	
M&A Heat Degree	The moving average of the number of M&A deals in each quarter divided by the historical average of the number of M&A deals in all previous quarters going back to 1985.
High Valuation Market[10]	Dummy equals one if a deal is conducted in high valuation month.
Low Valuation Market	Dummy equals one if a deal is conducted in low valuation month.

[10] To measure stock market valuation, this chapter follows the method of Bouwman, Fuller, and Nain (2009). Specifically, this chapter initially detrend the monthly P/E ratio of the S&P 500[10] from 1985 to 2009. Subsequently, each month is classified as below or above average base on whether the detrended P/E ratio of the month is lower or higher than the past five-year average. Finally, the lowest 50% of below average months are identified as "Low Valuation Market", while the highest 50% of above average months are identified as "High Valuation Market".

Chapter 3 : Financial Advisor Reputation and Takeover Premiums

3.1. Introduction

This chapter examines whether top-tier financial advisors can help their acquirer clients to minimize takeover premiums. In addition, this chapter also pays attention to whether multiple top-tier advisors can cooperate effectively to improve acquirer bargaining power.

Financial advisors play a pivotal role in the deal negotiation process. On one hand, it is possible that top-tier financial advisors have advised their acquirer clients to pay high takeover premiums to reach agreement on a deal, since the contingent fee structure encourages financial advisors to complete deals (McLaughlin, 1990; Rau, 2000). On the other hand, if top-tier financial advisors have superior skills, they should help their acquirer clients to enhance their bargaining power to minimize takeover premiums. Although the literature has examined the financial advisor reputation–quality mechanism, only a minority of these studies explores the relations between advisor reputation and takeover premiums. Additionally, existing empirical evidence suggest that top-tier advisors do not help their acquirer clients to minimize takeover premiums, and even lead to overpayment (Michel, Shaked and Lee, 1991; McLaughlin, 1992; Rau, 2000; Chahine and Ismail, 2009; Schiereck, Sigl-Grüb and Unverhau, 2009). However, the most recent study by Golubov, Petmezas and Travlos (2012) show that top-tier advisors have superior abilities to identify synergistic targets, and secure more shares of synergies in negotiation. In other words, top-tier advisors can improve their clients' bargaining power. Therefore, the results of top-tier advisors' effects on acquirer bargaining power remain inconclusive.

Furthermore, some acquirers retain multiple advisors or even multiple top-tier advisors for one deal. However, there is no research that has examined the effects of multiple top-tier advisors on takeover premiums. Social loafing refers to the tendency of group members to make less effort when they work collectively, compared to when they work individually. Even if top-tier advisors have superior skills to improve their clients' bargaining power, it is still unknown whether multiple top-tier advisors suffer from social loafing or if they can cooperate effectively to help acquirers lower their takeover premiums.

Motivated by the aforementioned issues, this chapter investigates the effects of top-tier advisors on takeover premiums by examining a sample of 3430 completed US M&A deals during 1990–2012. In line with the last chapter, top-tier financial advisors are defined as the top 10 investment banks listed in the market share-based league table. Bid premium is calculated as the difference between the deal price and the target's stock price four weeks prior to the announcement divided by the target's stock price four weeks prior to the announcement. To ensure that the results are not sensitive to the measures of takeover premiums, this chapter also calculates the premium of offer price to target price one week prior to the announcement and premium of offer price to target price one day prior to the announcement. In the vein of Schwert (1996), Bodnaruk, Massa and Simonov (2009), and Fich, Cai and Tran (2011), this chapter also uses target cumulative abnormal returns around announcement as the proxy of target premium. Eventually, this chapter finds that top-tier financial advisors can help their acquirer clients minimize takeover premiums. Specifically, acquirers advised by top-tier advisors pay 4.09% lower bid premiums (premiums of offer price to target price four weeks prior to the announcement) than acquirers advised by non-top-tier advisors, after controlling for firm and deal characteristics. Additionally, the number of top-tier advisors retained by acquirer is significantly positively related to bid premiums. In contrast, the total number of advisors

retained by an acquirer loses its significance when both the number of top-tier advisors and the total number of advisors are present in the regression. The result suggests that an increase in the number of top-tier advisors rather than an increase in the total number of advisors leads to a decrease in bid premiums. This empirical evidence indicates that multiple top-tier advisors do not suffer from social loafing. Instead, multiple top-tier advisors can effectively cooperate to enhance their acquirer clients' bargaining power.

It is reasonable that top-tier advisors can use less time to help their clients to complete deals, since top-tier advisors have superior skills. Additionally, it is possible that top-tier advisors rush to complete deals, due to the fee structure incentive. However, further research on time-to-completion indicates that acquirers advised by top-tier advisors do not take less time to complete deals than acquirers advised by non-top-tier advisors. Therefore, the result suggests that top-tier advisors work diligently during deal negotiation process.

However, this chapter also finds that top-tier advisors charge much higher advisory fees. Acquirer total advisory fees for deals with top-tier advisor involvement are 4.18 times as high as acquirer total advisory fees for deals advised by non-top-tier advisors, while total advisory fees for acquirers advised by multiple top-tier advisors are 3.43 times higher than total advisory fees for acquirers advised by a single top-tier advisor. Therefore, there is concern about whether the benefits of minimising bid premiums outweigh the disadvantages of overpayment of advisory fees. This chapter addresses this issue by calculating cost reduction, where cost reduction is defined as the sum of the reduction in the cost of bid premiums and acquirer total advisory fees. Since bid premiums and advisory fees differ across deals with different deal and firm characteristics, the estimation of cost reduction will be biased. Therefore, this chapter constructs five reference portfolios based on transaction value, relative size, acquirer market value, acquirer industry and

target industry. Based on different reference portfolios, acquirers advised by top-tier advisors reduce cost by $122.74 million to $199.23 million on average compared to acquirers advised by non-top-tier advisors, while acquirers advised by multiple top-tier advisors reduce cost by $371.78 million to $567.52 million on average compared to acquirers advised by a single top-tier advisor.

This research contributes to the M&A literature in the following respects. First, the literature on the effects of advisor reputation on takeover premiums is rare and the evidence is puzzling. This chapter employs the latest and comprehensive data in the research and finds that acquirers advised by top-tier advisors have lower bid premiums. In other words, the retention of top-tier advisors enhances acquirers' bargaining power, supporting the reputation–quality mechanism.

Second, the existing literature does not distinguish the effects of multiple top-tier advisors from the effects of a single top-tier advisor. This chapter suggests that multiple top-tier advisors do not suffer from social loafing. Instead, multiple top-tier advisors can effectively cooperate to enhance their clients' bargaining power in the negotiation process.

Third, this chapter also has important implications for practitioners. This chapter suggests that acquirers do not need to worry too much about overpayment of advisory fees. Indeed, top-tier advisors can help their clients reduce their total cost to a larger extent. The benefits of retaining top-tier advisors outweigh the disadvantages.

The remainder of this chapter is organised as follows. Section 2 reviews the literature. Section 3 constructs main hypotheses. Section 4 presents the data selection procedure and

methodology. Section 5 discusses the empirical results and shows robustness tests. Section 6 concludes.

3.2. Literature Review

Takeover premium can be used by acquirers to encourage targets to accept deals, or to deter competing bids (Jennings and Mazzeo, 1993). However, overpayments lead to negative market reactions (Varaiya and Ferris, 1987). On the other hand, takeover premium is also an indicator of bargaining power for merger participants. Specifically, with strong bargaining power, acquirers (targets) can minimise (maximise) takeover premiums, thereby negotiating favourable deals (Walkling and Edmister, 1985).

The existing literature has examined the determinants of takeover premiums. For example, Hirshleifer and Png (1989) suggest that bid competition increases target premiums. Comment and Schwert (1995) find that anti-takeover measures, such as poison pills, enhance target bargaining power and therefore increase takeover premiums. In addition, Cotter, Shivdasani and Zenner (1997) argue that targets with independent outside directors tend to employ anti-takeover strategies and gain higher bid premiums in tender offers. Hayward and Hambrick (1997) find that hubristic CEOs pay higher takeover premiums, and lack of board vigilance renders overpayment more severe. Betton and Eckbo (2000) show that acquirers with higher pre-deal ownership of target shares pay lower bid premiums, and acquirer toehold helps to alleviate bid contests and target resistance. In line with Betton and Eckbo (2000), Bris (2002) and Ismail (2008) also suggest that acquirer toehold size is negatively related to bid premiums. Datta, Iskandar-Datta and Raman (2001) find that acquirer CEOs who have high equity-based compensation tend to pay lower takeover premiums. Bates and Lemmon (2003) and Officer (2003) find that target

shareholders earn higher bid premiums in deals that contain termination fee clauses. Moeller, Schlingemann and Stulz (2004) show that larger acquirers pay higher takeover premiums, but gain lower returns around announcement. Bargeron *et al.* (2008) find that public acquirers pay higher takeover premiums compared to private acquirer. Aktas, de Bodt and Roll (2010) argue that latent competition is positively related to takeover premiums, while anticipated auction cost is negatively related to takeover premiums. Fich, Cai and Tran (2011) find that targets that grant unscheduled stock options to CEOs during negotiations tend to gain lower takeover premiums. Bargeron (2012) shows that shareholder tender agreements lead to lower takeover premiums.

The above literature reveals that any factors that affect the bargaining position of the merger participants will finally impact takeover premiums (Eckbo, 2009). Indeed, financial advisors play a pivotal role in bidding strategy development and deal negotiation process and therefore exert influence on the bargaining power of the merger participants. However, there is only a little literature that pays attention to the relations between investment bank reputation and takeover premiums. For instance, Michel, Shaked and Lee (1991) compare the performance of major investment banks over the period 1981–1998, and find that Drexel Burnham Lambert, a relatively less prestigious bank, helped its acquirer clients generate the lowest target premiums measured by target announcement abnormal returns compared to more prestigious banks, such as Goldman Sachs, Morgan Stanley, First Boston, Lehman Brothers and Salomon Brothers. In other words, top-tier banks did not minimize the takeover premiums for their acquirer clients.

By examining a sample of tender offers during 1978–1986, McLaughlin (1992) finds that reputations for target advisors have no effect on bid premiums, whereas reputations for acquirer advisors have significant effects on bid premiums. Specifically, acquirers advised

by low-reputation banks pay significantly lower bid premiums. McLaughlin (1992) provides two possible explanations for the results: 1) high-reputation banks advise their acquirer clients to pay higher premiums to accomplish the agreement; and 2) high-reputation banks are retained in complex acquisitions where higher bid premiums are necessary to complete deals. In addition, deals with multiple bidders require higher bid premiums, indicating that multiple-bidder contests result in overbidding. In other words, competitive auctions are in the interest of targets, but are detrimental to acquirers. Furthermore, compared to approved offers, resisted offers are associated with higher bid premiums, which suggest that acquirers need to raise their bid price to overcome management resistance by targets.

Rau (2000) investigates whether higher reputation banks advise acquirers to pay higher bid premiums to ensure deal completion, through analysing a sample of tender offers and mergers over the period 1980–1991. Rau (2000) shows that in tender offers the median bid premiums paid by acquirers advised by first-tier, second-tier and third-tier banks are 56.4%, 58.1% and 38.1%, respectively. In other words, acquirers advised by higher-tier banks pay significantly higher bid premiums than acquirers advised by third-tier banks. Rau (2000) argues that this result is consistent with the deal completion hypothesis that incentive fee structure stimulates top-tier advisors to complete deals rather than chase performance. In contrast, the difference in premiums across mergers advised by different tier banks is statistically insignificant. In addition, bank reputations are not significantly related to bid premiums in multivariate regression analysis for both tender offers and mergers.

Chahine and Ismail (2009) explore the relations among bank reputations, bid premiums and advisory fees by analysing a sample of 635 acquisitions during 1985–2004. Chahine

and Ismail (2009) find that more prestigious banks charge higher advisory fees; however, neither acquirer bank reputation nor target bank reputation have significant effects on bid premiums. In addition, they show that acquirer advisory fees are negatively related to bid premiums, whereas target advisory fees are positively related to bid premiums. Interestingly, the research also suggests that acquirers pay lower bid premiums, when relative advisory fees (acquirer advisor fees over target advisory fees) are higher.

Schiereck, Sigl-Grüb and Unverhau (2009) find that bank reputation has little effect on bid premium, by examining 285 European acquisitions during 1997–2002. Specifically, their research shows that acquirers advised by top-tier advisors do not minimise bid premium while targets advised by top-tier advisors do not maximise bid premium. In other words, the results suggest that top-tier advisors do not improve their clients' bargaining power.

In addition to the above five studies that examine the effects of bank reputation on bid premiums, Bodnaruk, Massa and Simonov (2009), Kisgen, Qian and Song (2009), and Song, Wei and Zhou (2013) also examine the relations between financial advisors and takeover premiums, but from different angles. Specifically, Bodnaruk, Massa and Simonov (2009) examine how advisory stakes influence target premiums. They use target cumulative abnormal returns around announcement as the proxy of target premiums, and find that deals in which acquirer advisors own target stakes generate higher target premiums. The results suggest that investment banks that own target shares exploit private information to profit from acquisitions.

Kisgen, Qian and Song (2009) explore how fairness opinions provided by investment banks impact bid premiums. They find that fairness opinions for targets do not have significant effects on premiums. In contrast, acquirers that apply fairness opinions pay

significantly lower bid premiums. Additionally, the effects of acquirer-side fairness opinions are stronger, when the fairness opinions are provided by high-reputation banks or multiple banks.

Song, Wei and Zhou (2013) investigate the influence of the choice between boutique advisors and full-service advisors on the deal outcomes measured by bid premiums. They define boutique advisors as those small but specialised banks that do not provide full spectrum services, and find that boutique advisors can help their acquirer clients pay lower bid premiums compared to full-service advisors.

3.3. Hypotheses

There is little literature that focuses on the relations between takeover premiums and advisor reputation. There is no evidence that top-tier advisors can help their acquirer clients to minimize premiums. Similarly, the last chapter of this dissertation has reviewed the relations between acquirer returns and advisor reputation, and find that most studies do not support that top-tier advisors can improve acquirer performance. However, the most recent research by Golubov, Petmezas and Travlos (2012) suggest that top-tier advisors have superior skills to identify synergistic targets and secure a higher share of synergies for their clients. The last chapter of this dissertation also highlights the superior abilities of top-tier advisors to help their acquirer clients outperform in the long term. Therefore, this chapter assumes that top-tier advisors have superior abilities to help their clients gain higher bargaining power in the negotiation process, thereby paying lower takeover premiums. Consequently, this chapter formulates the following hypothesis:

H1: The retention of top-tier advisors by acquirers is negatively related to takeover premiums.

In addition, if banks care less about their reputational capital, they will suffer from social loafing, which will have a negative effect on the quality of the advisory service. However, top-tier advisors should care more about their reputational capital, since the market share is determined by the bank reputation. To defend their leading position in the M&A market, top-tier advisors have to provide M&A advisory service with the utmost seriousness, and cooperate effectively. Therefore, this chapter expects that top-tier advisors will not suffer from social loafing, and that the cooperation of multiple top-tier advisors improves their clients' bargaining power in negotiation process. As a result, this chapter establishes the following hypothesis:

H2: The number of top-tier advisors retained by acquirers is negatively related to takeover premiums.

3.4. Data and Methodology

3.4.1. Sample Selection

This chapter analyses a sample of US domestic M&As announced over the period 1st January 1990 to 31st December 2012.The M&As deal information is acquired from Thomson One Banker. The original sample includes 203,005 deals. Deal status is required to be completed or unconditional, leading to a sample of 158,507 deals. Acquirer public status is required to be public, which leaves 73,932 deals. To calculate bid premium, targets are required to be publicly listed firms, yielding a sample of 11,294 deals. This chapter excludes acquisitions with transaction values lower than $1 million, which yields a sample of 9803 deals. Bankruptcy acquisitions, going-private transactions, leveraged buyouts, liquidations, repurchases, restructurings, reverse takeovers, and privatizations are excluded from the sample, leaving a panel of 6778 observations. Since this chapter

focuses on the effects of financial advisors, acquirers are required to have their advisor information recorded by Thomson One Banker, yielding 4119 deals. This chapter excludes deals that do not have sufficient data to calculate bid premium, leaving 3681 observations. To control for deal characteristics and firm characteristics, observations are required to report transaction value, payment method information, and pre-deal ownership to Thomson One Banker; and have sufficient accounting data in the Compustat and stock price information in the CRSP. These requirements yield a final sample of 3430 deals. In the final sample, 3188 transactions are advised by investment banks, while 242 transactions are in-house deals (recorded as 'no investment bank retained' by Thomson One Banker).

3.4.2. Methodology

3.4.2.1. Measure of Advisor Reputation

Chapter 1 has explained the binary classification of advisor reputation. This chapter uses the same methodology to distinguish between top-tier (top 10) and non-top-tier advisors. Since the rankings gradually changed and some banks merged over the sample period, advisor reputation is measured over the two periods 1990–1999 and 2000–2012, respectively.[11] Although the ranking of investment banks over the two periods are different, the top 10 investment banks are the same. Specifically, top-tier investment banks include Goldman Sachs, Morgan Stanley, Bank of America Merrill Lynch[12], JP Morgan, Citi[13], Credit Suisse[14], Barclays[15], Lazard, UBS and Deutsche Bank.

[11] Appendix 3.1 shows the top 25 investment banks ranked by transaction value. Financial advisor league tables were downloaded from Thomson One Banker. The ranking list for the 1990s and 2000s are presented in Panel A and B, respectively.

[12] Bank of America acquired Merrill Lynch and began rebranding under the name of Bank of America Merrill Lynch in 2009.

[13] Travelers Group acquired Salomon Brothers (top-tier) in 1998 and subsequently merged with Citicorp the same year, establishing Citigroup.

3.4.2.2. Measure of Takeover Premium

Premium acquired from Thomson One Banker is calculated as the percentage difference between offer price and target stock price prior to announcement, where the pre-deal target price is taken four weeks, one week and one day prior to the acquisition announcement date. Specifically, '*Bid Premium (four weeks prior to announcement)*' is calculated as the difference between the deal price and the target's stock price four weeks prior to the announcement divided by the target's stock price four weeks prior to the announcement, expressed as the following equation:

$$Bid\ \ Premium\ \ (4\ \ weeks\ \ prior\ \ to\ \ announcement)$$
$$= \frac{offer\ \ price - target\ \ stock\ \ price\ \ 4\ \ weeks\ \ prior\ \ to\ \ announcement}{target\ \ stock\ \ price\ \ 4\ \ weeks\ \ prior\ \ to\ \ announcement}$$

'*Bid Premium (one week prior to announcement)*' is calculated as the difference between the deal price and the target's stock price one week prior to the announcement divided by the target's stock price 1 week prior to the announcement, expressed as the following equation:

$$Bid\ \ Premium\ \ (one\ \ week\ \ prior\ \ to\ \ announcement)$$
$$= \frac{offer\ \ price - target\ \ stock\ \ price\ \ 1\ \ week\ \ prior\ \ to\ \ announcement}{target\ \ stock\ \ price\ \ 1\ \ week\ \ prior\ \ to\ \ announcement}$$

'*Bid Premium (one day prior to announcement)*' is calculated as the difference between the deal price and the target's stock price one day prior to the announcement divided by the target's stock price one day prior to the announcement, expressed as the following equation:

---

[14] First Boston was acquired by Credit Suisse in 1990.

[15] Lehman Brothers declared bankruptcy in 2008 and was acquired by Barclays Capital the same year.

$$Bid\ \ Premium\ \ (1\ \ day\ \ prior\ \ to\ \ announcement)$$
$$= \frac{offer\ \ price - target\ \ stock\ \ price\ \ 1\ \ day\ \ prior\ \ to\ \ announcement}{target\ \ stock\ \ price\ \ 1\ \ day\ \ prior\ \ to\ \ announcement}$$

If Thomson One Banker reports the premium, this chapter will use the value recorded by the database. If the premium is missing in the database, this chapter will calculate the ratio based on above formulas, when the data is adequate. To avoid the influence of information leakage, the literature (Officer, 2003; Chahine and Ismail, 2009; Fich, Cai and Tran, 2011) tends to use premium of offer price to target price four weeks prior to the announcement. This chapter focuses on the bid premium four weeks prior to the announcement, and uses bid premium one week/one day prior to announcement as the robustness check.

In the vein of Schwert (1996), Bodnaruk, Massa and Simonov (2009) and Fich, Cai and Tran (2011), this chapter also uses target cumulative abnormal returns around announcement as the proxy of target premium. Specifically, target announcement CARs are calculated by using a market model. The market model is shown as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

where R_{it} is the daily stock return for firm I on date t and R_{mt} is the daily return for the value-weighted CRSP index on date t. The market model parameters are estimated over the pre-event window [-365, -28]. Subsequently, market model CARs are calculated over a [T_1, T_2] window around announcements, as follows:

$$CAR_{i,T_1T_2} = \sum_{t=T_1}^{T_2} \left[R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt})\right]$$

3.4.2.3. Measure of Cost Reduction

If top-tier financial advisors have superior skills and therefore can help their clients gain stronger bargaining power in negotiation processes, acquirers advised by top-tier advisors will pay a lower bid premium than other acquirers. However, deals with top-tier advisor involvement require significantly higher total advisory fees. Hence, there is a concern that overpayment of advisory fees could offset cost saving in bid premiums. Therefore, this chapter calculates cost reduction to examine whether cost saving in bid premiums can cover advisory fees.

In this chapter, cost reduction is defined as the sum of the reduction in the costs of bid premium and acquirer total advisory fees. *Cost Reduction* is calculated by the following equation:

$$Cost\ \ Reduction_{it} = -Abnormal\ \ Dollar\ \ Premium_{it} - Abnormal\ \ Advisory\ \ Fees_{it}$$

where *Abnormal Dollar Premium*$_{it}$ is the abnormal dollar premium paid by acquirer *I* on date *t*; and *Abnormal Advisory Fees*$_{it}$ is the abnormal advisory fees paid by acquirer *I* on date *t*.

Abnormal Dollar Premium is calculated as:

$$Abnormal\ \ Dollar\ \ Premium_{it} = Target\ \ Market\ \ Value_{it} \times Abnormal\ \ Bid\ \ Premium_{it}$$

where Target Market Value$_{it}$ is the market value for target *I* on date *t*;[16] *and Abnormal Bid Premium*$_{it}$ is the abnormal bid premium paid by acquirer *I* on date *t*.

Abnormal Premium is calculated as:

[16] Target Market Value is the market value of target firm measured four weeks before the announcement (CRSP item PRC×SHROUT).

$$Abnomal\ \ Bid\ \ Premium_{it} = Bid\ \ Premium_{it} - Bid\ \ Premium_{jt}$$

where *Bid Premium*$_{it}$ is the bid premium paid by acquirer *I* on date *t*; and *Bid Premium*$_{pt}$ is the mean bid premium for the reference portfolio *p* at year *t*.[17]

Abnormal total advisory fees is calculated as:

$$Abnormal\ \ Advisory\ \ Fees_{it} = Total\ \ Advisory\ \ Fees_{it} - Total\ \ Advisory\ \ Fees_{jt}$$

where *Total Advisory Fees*$_{it}$ is the total advisory fees paid by acquirer *I* on date *t*; and *Total advisory Fees*$_{pt}$ is the mean acquirer total advisory fees for the reference portfolio *p* at year *t*.

To minimize the influence of extreme outliers, the variables used in the above formulas, including *Bid Premium*$_{it}$, *Total Advisory Fees*$_{it}$, and *Target Market Value*$_{it}$, are winsorized at the 2% and 98% levels, when *Cost Reduction*$_{it}$ is calculated.

Reference portfolios are constructed in each year based on transaction value, relative size, acquirer firm size, acquirer industry and target industry. More specifically, this chapter constructs five reference portfolios – TV_Quintile, RS_Quintile, AMV_Quintile, A_Ind, and T_Ind. TV_Quintile refers to a reference portfolio that is constructed based on transaction value quintile. RS_Quintile refers to a reference portfolio that is constructed based on relative size quintile. AMV_Quintile refers to a reference portfolio that is constructed based on acquirer market value quintile. A_Ind refers to a reference portfolio that is constructed based on acquirer industry. T_Ind refers to a reference portfolio that is constructed based on target industry.

[17] Bid premium is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement.

3.4.2.4. Regression Analysis

To interpret the source of outperformance of acquirers advised by top-tier advisors, this chapter investigates whether top-tier advisors can help acquirers pay lower bid premium, whether top-tier advisors charge premium fees, and whether top-tier advisors spend a shorter time completing deals. In this chapter, the key explanatory variables are the same as the last chapter. Specifically, $TopTier_i$ equals one if acquirer i retains at least one top-tier advisor for the deal, and zero otherwise. $No.\ of\ TopTier_i$ equals the number of top-tier advisors retained by the acquirer i for the deal. In addition to these two key explanatory variables, $No.\ of\ Advisors_i$ equals the total number of advisors retained by the acquirer i for the deal. $InHouse_i$ equals one if acquirer i does not retain any advisors for the deal, and zero otherwise. This chapter also includes a series of control variables that influence bid premiums, advisory fees and time-to-completion. Specifically, $Firm_i$ represents the firm characteristics of acquirer i at the end of the fiscal year prior to the announcement, and $Deal_i$ represents the deal characteristics of acquirer i. Firm and deal characteristics that are used in this chapter will be shown later in this section. This research also controls for year fixed effects (f_t) and industry fixed effects ($f_{ind.}$). To minimize the influence of outliers, all continuous variables are winsorized at 2% and 98%.[18]

3.4.2.4.1. Takeover Premiums

If top-tier financial advisors have superior skills, they can help their clients gain greater bargaining power in negotiations processes, thereby paying a lower bid premium. If acquirers pay lower bid premiums, they will gain more shares of synergies. Intuitively, different acquirers in different situations have different bargaining positions. It is

[18] Results hold when the variables are winsorized at different levels, such as 1% and 99%, 3% and 97%, and 5% and 95%.

necessary to control for firm and deal characteristics. Therefore, this chapter examines the effects of top-tier advisors on bid premium by following OLS regression:

$$Premium_i = \alpha_0 + \alpha_1 TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

Furthermore, if multiple top-tier advisors can work collectively to improve performance, acquirers advised by multiple top-tier advisors will pay lower bid premiums than acquirers advised by single top-tier advisors. In other words, the number of top-tier advisors retained by acquirers will be negatively related to bid premium. In contrast, if multiple top-tier advisors suffer from social loafing, the effects of multiple top-tier advisors on bid premium will be insignificant.

Therefore, this chapter examines the relations between the number of top-tier advisors retained and the bid premium by following OLS regression:

$$Premium_i = \alpha_0 + \alpha_1 No.of\ \ TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

3.4.2.4.2. Advisory Fees

If top-tier advisors have superior skills and provide a superior service, it is reasonable that they charge premium fees. Otherwise, overpayment leads to negative market reactions. Furthermore, advisory fees are deal-specific. In other words, deal complexity determines the advisory fees (McLaughlin, 1990). Since advisory fees are censored data, a Tobit model should be used. Therefore, this chapter examines whether top-tier advisors charge much higher advisory fees; and whether an increase in the number of top-tier advisors retained results in overpayment by following Tobit regressions:

$$Total\ \ Advisory\ \ Fees_i = \alpha_0 + \alpha_1 TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 Firm_i + \alpha_4 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

$$Total\ \ Advisory\ \ Fees_i = \alpha_0 + \alpha_1 \text{No}.of\ \ TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 Firm_i + \alpha_4 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

3.4.2.4.3. Time to Completion

Contingent fees stimulate advisors to complete deals rather than chase performance. It is necessary to examine whether top-tier advisors rush to complete deals. If top-tier advisors have superior skills, it is reasonable that they use less time to complete deals than non-top-tier advisors. If top-tier advisors spend more time on takeover advisory services, it suggests that top-tier advisors work diligently. The speed of deal completion could be affected by the complexity of deals and acquirer skills. This chapter expect that acquirers who have more past M&A experience will be more skilful, and therefore use acquirer past experience as the proxy of acquirer M&A skills. Past experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Since the time to completion is a non-negative integer, Poisson regression or negative binomial regression should be used. Poisson regression will not be reliable if the variance of the dependent variable is much larger than its expected value. Given the presence of overdispersion in the time to completion, the negative binomial regression should be used. This chapter examine whether top-tier advisors use less time to complete deals by following negative binomial regression:

$$Time\ to\ completion_i = \alpha_0 + \alpha_1 TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

In addition, if multiple top-tier advisors suffer from social loafing, they will use more time to complete deals. Therefore, this chapter examines the relations between number of top-tier advisors and time-to-completion by following negative binomial regression:

$$Time\ to\ completion_i = \alpha_0 + \alpha_1 No.of\ \ TopTier_i + \alpha_2 No.of\ \ Advisors_i + \alpha_3 InHouse_i + \alpha_4 Firm_i + \alpha_5 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

3.4.2.4.4. Control Variables: Firm and Deal Characteristics

The control variables in this chapter include firm and deal characteristics.[19] For firm characteristics (*Firm$_i$*), this chapter controls for size (*Ln(MV)*), market-to-book ratio (*M/B*), leverage (*Leverage*), cash flow-to-equity ratio (*Cash flows/Equity*), pre-deal stock performance (*RUNUP*), pre-deal percentage ownership (*Pre-deal Ownership*), and acquirer takeover experience (*Past Experienced*).

For deal characteristics (*Deal$_i$*), this chapter controls for deal size (*Ln(TV)*), relative transaction values (*Relative Size*), acquirer public status (*Public*), payment method (*Cash/Stock*), deal attitude (*Hostile*), bid competition (*Competing Bid*), tender offers (*Tender offer*) and diversifying deals (*Diversification*).

[19] All the control variables mentioned in this section are described in Appendix 3.2, where Panels A and B present firm characteristics and deal characteristics, respectively.

3.5. Results

3.5.1. Summary Statistics and Univariate Test

3.5.1.1. Entire Sample

Table 3.1 exhibits summary statistics for the entire sample and the univariate comparison between deals advised by investment banks and in-house deals. The sample is made up of US public acquisitions during 1990–2012. In the sample, in-house deals and deals with advisor involvement account for 7.06% and 92.94% of the sample, respectively.

[Insert Table 3.1 here]

Panel A of Table 3.1 shows the deal characteristics. For the entire sample, the mean and median bid premiums (4w)[20] are 46.32% and 33.29%, respectively. These results are consistent with the existing studies. For example, Officer (2003) showed that the mean (median) premium calculated based on final offer price is 48.65% (41.96%), and the mean (median) premium calculated based on initial offer price is 47.83% (40.49%). For Golubov, Petmezas and Travlos (2012), the mean and median premiums are 42.38% and 34.36%, respectively. The difference in mean premium between deals advised by banks and in-house deals is insignificant. This result is influenced by outliers. If the variable is winsorized at the 2% and 98% levels, the difference in mean premium between deals advised by banks and in-house deals will become significant. Specifically, acquirers advised by banks will pay 4.46% (p=0.098) lower bid premium on average, compared to in-house acquirers. In addition, the median bid premiums (4w) for deals advised by banks and in-house deals are 33.15% and 35.65%, respectively; the difference is also significant (p=0.068). These results show that acquirers advised by banks pay lower bid premium

[20] Bid premium (4w) is premium of offer price to target stock price 4 weeks prior to the announcement.

than in-house acquirers, suggesting that advisors can help their clients gain bargaining advantage in negotiation processes. For the entire sample, the mean (median) Premium (1w)[21] is 40.58% (28.84%), and the mean (median) Premium (1d)[22] is 35.77% (25.01%). In other words, the mean (median) bid premium (4w) is higher than the mean (median) bid premium (1w), and the mean (median) bid premium (1w) is higher than the mean (median) bid premium (1d), which indicate that target stock price steadily increase over the four weeks prior to takeover announcement, reflecting the influence of information leakage.

This chapter uses target announcement cumulative abnormal return (CAR) as the proxy of target premium. The mean (median) target CAR for deals advised by banks over the three-day event window is 19.08% (14.49%); whereas the mean (median) target CAR for in-house deals over the three-day event window is 23.75% (18.09%). The differences in mean (median) target CARs are significant. These results indicate that deals advised by banks generate lower target premiums than in-house deals generate. Lower target premiums suggest that advisors help acquirers gain bargaining advantage and secure more shares of synergies. These results concur with the results of bid premiums.

The mean (median) time-to-completion for deals advised by banks and in-house deals are 135.21 (118.00), and 143.36 (134.00), respectively. The difference in median time-to-completion is significant. These results indicate that acquirers advised by banks use less time to complete deals compared to in-house acquirers.

[21] Bid premium (1w) is premium of offer price to target stock price 1 week prior to the announcement.

[22] Bid premium (1d) is premium of offer price to target stock price 1 day prior to the announcement.

The mean (median) transaction value for deals advised by banks and in-house deals are $1724.65 million ($287.33 million) and $410.68 million ($93.01 million), respectively; and the differences are statistically significant. The transaction value is much greater for deals advised by banks than for in-house deals. Similarly, the relative size of deals advised by banks is also significantly larger than the relative size of in-house deals. All-stock deals, all-cash deals and mixed paid deals account for 41.11%, 28.89% and 30.00% of the entire sample, respectively. Compared to in-house acquirers, acquirers advised by banks make significantly fewer all-stock deals but more mixed paid deals. In addition, acquirers advised by banks conduct a higher percentage of hostile deals and tender offers, and are involved in a higher percentage of competing bids compared to in-house acquirers. For the entire sample, 29.36% of deals are diversifying deals. In terms of diversification, the difference between acquirers advised by banks and in-house acquirers is insignificant.

Panel B of Table 3.1 presents firm characteristics of acquirers. For the entire sample, the mean (median) acquirer market value is $11341.11 million ($1473.85 million). The mean (median) market-to-book ratio is 6.61 (2.38). The mean (median) leverage ratio is 0.38 (0.37). The mean and median cash flows-to-equity ratio is 0.06 (0.05). The mean (median) stock price runup is 13.09% (8.01%), respectively. Compared to in-house acquirers, acquirers advised by banks have significantly smaller firm size, lower market-to-book ratio, lower leverage ratio, higher cash flows-to-equity ratio, and higher stock-price run-up. These results suggest that in-house deals tend to be conducted by large firms, value firms, low-debt firms, and firms with better operating and stock performance. Pre-deal ownership of target shares average 2.79%. In terms of pre-deal ownership, the difference between acquirers advised by banks and in-house acquirers is insignificant. On average, acquirers advised by banks and in-house acquirers conducted 7.89 and 15.12 deals

respectively over the five-year period prior to the acquisition announcement. The difference is significant. In other words, the in-house acquirers are more experienced.

Panel C of Table 3.1 shows financial advisor related information for deals advised by banks. The mean and median acquirer total advisory fees are $4.75 million and $1.70 million, respectively. Acquirers advised by banks retain 1.20 advisors on average.

Overall, Table 3.1 shows that in-house acquirers spend more time completing deals and pay higher bid premiums than acquirers advised by banks. In-house deals also create more target premiums. These results suggest that advisors are able to complete deals in a shorter length of time, help their acquirer clients gain greater bargaining power in negotiation processes, and therefore secure more shares of synergies. In other words, investment banks have stronger professional skills than in-house experts.

3.5.1.2. Sub-Sample of Deals Advised by Advisors

Table 3.2 shows summary statistics for the sub-sample of deals advised by investment banks and the univariate comparison between deals advised by top-tier and non-top-tier advisors. In acquisitions advised by banks, 53.86% and 46.14% of deals are advised by top-tier and non-top-tier advisors, respectively.

[Insert Table 3.2 here]

Panel A of Table 3.2 presents deal characteristics for the sub-sample of deals advised by banks. In terms of mean bid premium, the differences between deals advised by top-tier and non-top-tier advisors are insignificant. Outliers influence the results. After

winsorization,[23] acquirers advised by top-tier advisors pay lower bid premiums (4w), lower bid premiums (1w), and lower bid premiums (1d) than acquirers advised by non-top-tier advisors by 3.54% (p=0.0114), 3.08% (p=0.0118), and 2.89% (p=0.0118) respectively, on average. In addition, median bid premium (4w), bid premium (1w) and bid premium (1d) for deals advised by top-tier advisors are 32.50%, 27.91%, and 23.90%, respectively; whereas median bid premium (4w), bid premium (1w) and bid premium (1d) for deals advised by non-top-tier advisors are 34.14%%, 29.47% and 25.97%, respectively. The differences in median bid premiums between deals advised by top-tier and non-top-tier advisors are statistically significant. Therefore, the above results suggest that top-tier advisors can help their clients pay lower bid premiums.

Although the median time-to-completion is significantly longer for deals advised by non-top-tier advisors than for deals advised by top-tier advisors, acquirers advised by top-tier advisors do not use shorter time to complete deals on average.

The mean and median transaction values for deals advised by top-tier advisors are $2692.27 million and $627.47 million, respectively; whereas the mean and median transaction value for deals advised by non-top-tier advisors are $595.21 million and $106.88 million, respectively. Acquirers advised by top-tier advisors make significantly larger deals than acquirers advised by non-top-tier advisors. However, the relative size is significantly smaller for deals advised by top-tier advisors than non-top-tier advisors. In deals advised by top-tier advisors, all-stock deals, all-cash deals and mixed paid deals account for 33.61%, 32.03%, and 34.36%, respectively. In contrast, 46.84%, 25.63%, and 27.53% of deals are all-stock deals, all-cash deals and mixed deals, respectively. Acquirers advised by top-tier advisors conduct a lower percentage of all-stock deals but a higher

[23] Variables are winsorized at the 2% and 98% levels.

percentage of all-cash deals and mixed paid deals, compared to acquirers advised by non-top-tier advisors. Acquirers advised by top-tier advisors make a significantly higher percentage of hostile deals than acquirers advised by non-top-tier advisors (2.10% versus 0.82%). Competing bid accounts for 4.19% and 2.86% of deals advised by top-tier and non-top-tier advisors, respectively; the difference is statistically significant. 26.38% of deals advised by top-tier advisors are tender offers, whereas 20.19% of deals advised by non-top-tier advisors are tender offers. Diversifying deals occupy 31.33% and 27.19% of deals advised by top-tier and non-top-tier advisors, respectively; the difference is significant. Therefore, acquirers advised by top-tier advisors make larger transactions, more hostile deals, more tender offers, and more diversifying deals compared to acquirers advised by non-top-tier advisors. In other words, top-tier advisors are more likely to involve deals with greater complexity.

Panel B of Table 3.2 presents acquirer firm characteristics for the sub-sample of deals advised by banks. In terms of market value, the acquirers advised by top-tier advisors are $11979.33 million (p=0.000) larger than acquirers advised by non-top-tier advisors on average, while the median acquirer advised by top-tier advisors is $3000.26 million (p=0.000) larger than the median acquirer advised by non-top-tier advisors. The median market-to-book ratio for acquirers advised by top-tier and non-top-tier advisors are 2.54 and 2.07, respectively; the difference is significant. The median cash flows-to-equity ratio for acquirers advised by top-tier and non-top-tier advisors are 0.06 and 0.05, respectively; the difference is significant. On average, acquirers advised by top-tier advisors make 4.15 (p=0.000) more deals than acquirers advised by non-top-tier advisors over the five-year period prior to the acquisition announcement. In other words, more experienced acquirers tend to retain top-tier advisors. The differences in leverage ratio, stock price run-up, and pre-deal ownership between acquirers advised by top-tier and non-top-tier advisors are

insignificant. Therefore, acquirers advised by top-tier advisors tend to be larger firms, more glamour firms, firms with higher cash flows, and more experienced acquirers.

Panel C of Table 3.2 presents financial advisors related information for the sub-sample of deals advised by banks. On average, acquirers that retain top-tier advisors employ 1.30 advisors, while acquirers advised by non-top-tier advisors employ 1.08 advisors for one deal. In other words, the financial advisory team are larger for acquirers advised by top-tier advisors than acquirers advised by non-top-tier advisors. Furthermore, the mean (median) total advisory fees paid by acquirers advised by top-tier and non-top-tier advisors are $7.90 million ($4.00 million) and $1.89 million ($0.75 million), respectively. On average, acquirers advised by top-tier advisors paid 4.18 times higher total advisory fees than acquirers advised by non-top-tier advisors in public acquisition.

Overall, Table 3.2 shows that top-tier financial advisors can help their clients pay lower bid premiums, indicating that top-tier advisors play a pivotal role in the negotiation process to help their clients secure a higher proportion of synergies, even though top-tier advisors are retained for more complex deals.

3.5.1.3. Sub-Sample of Deals Advised by Top-Tier Advisors

Table 3.3 shows summary statistics for the sub-sample of deals advised by top-tier investment banks and the univariate comparison between deals advised by a single top-tier advisor and multiple top-tier advisors. In deals advised by top-tier advisors, 11.01% of acquirers retain more than one top-tier bank in one deal.

[Insert Table 3.3 here]

Panel A of Table 3.3 presents deal characteristics for the sub-sample of deals advised by top-tier advisors. The mean (median) bid premium (4w), bid premium (1w), and bid premium (1d) for deals advised by multiple top-tier advisors are 27.65% (27.47%), 24.80% (22.63%) and 22.57% (19.63%), respectively. In contrast, the mean (median) bid premium (4w), bid premium (1w), and bid premium (1d) for deals advised by a single top-tier advisor are 47.13% (33.33%), 42.03% (28.53%) and 36.92% (24.47%), respectively. The differences in bid premiums between deals advised by multiple top-tier advisors and a single top-tier advisor are highly significant. These results show that acquirers advised by multiple top-tier advisors pay significantly lower bid premiums than acquirers advised by a single top-tier advisor.

In addition, the mean and median target CARs [-1, 1] for deals advised by multiple top-tier advisors are 13.97% and 9.87%, respectively; while the mean and median target CARs [-1, 1] for deals advised by a single top-tier advisor are 20.14% and 15.45%, respectively. The differences in target CARs between deals advised by multiple top-tier advisors and a single top-tier advisor are highly significant. These results show that deals advised by multiple top-tier advisors generate significantly lower target premiums than deals advised by a single top-tier advisor.

On average, acquirers advised by multiple top-tier advisors use 26.94 more days to complete deals than acquirers advised by a single top-tier advisor. The median acquirers advised by multiple top-tier advisors spend 24 more days to complete deals than the median acquirers advised by a single top-tier advisor.

The mean and median transaction values for deals advised by multiple top-tier advisors are $7917.70 million and $3130.88 million, respectively; whereas the mean and median

transaction values for deals advised by a single top-tier advisors are $2045.93 million and $512.67 million, respectively. The difference in transaction value between deals advised by multiple top-tier advisors and a single top-tier advisor are statistically significant. On average, the transaction values for deals advised by multiple top-tier advisors are 3.87 times as high as transaction value for deals advised by a single top-tier advisor. In addition, the mean (median) relative size for deals advised by multiple top-tier advisors is also significantly higher than the mean (median) relative size for deals advised by a single top-tier advisor. Acquirers advised by multiple top-tier advisors conduct a lower percentage (14.57%, p=0.000) of all-stock deals, and a higher percentage (19.65%, p=0.000) of mixed paid deals, compared to acquirers advised by a single top-tier advisor. Diversifying deals account for 23.28% and 32.33% of deals advised by multiple top-tier advisors and a single top-tier advisor, respectively. In other words, acquirers advised by multiple top-tier advisors make significantly less percentage (9.05%, p=0.007) of diversifying deals than acquirers advised by a single top-tier advisor. In terms of deal attitude, bid competition, and tender offer, the difference is insignificant between deals advised by multiple top-tier advisors and a single top-tier advisor.

Panel B of Table 3.3 presents acquirer firm characteristics for the sub-sample of deals advised by top-tier advisors. The mean (median) market value for acquirers advised by multiple top-tier advisors is $22432.74 million ($8828.10 million), while the mean (median) market value for acquirers advised by a single top-tier advisor is $15188.02 million ($3120.94 million). Firm size is significantly larger for acquirers advised by multiple top-tier advisors than acquirers advised by a single top-tier advisor. Additionally, acquirers advised by multiple top-tier advisors have a significantly lower market-to-book ratio, higher leverage ratio, and a higher cash flows-to-equity ratio. In terms of stock price runup, pre-deal ownership and past M&A experience, the differences between acquirers

advised by multiple top-tier advisors and a single top-tier advisor are statistically insignificant. These results indicate that acquirers that retain multiple top-tier advisors tend to be large firms, value firms, firms with higher debt ratio, and firms with better operating performance.

Panel C of Table 3.3 presents financial advisor related information for the sub-sample of deals advised by top-tier advisors. Predictably, acquirers advised by multiple top-tier advisors retain significantly more financial advisors for a deal, compared to acquirers advised by a single top-tier advisor. In addition, mean (median) total advisory fees for acquirers advised by multiple top-tier advisors and a single top-tier advisor are $20.97 million ($15.00 million) and $6.11 million ($3.50 million), respectively. Acquirers advised by multiple top-tier advisors pay 3.43 times higher total advisory fees than acquirers advised by a single top-tier advisor on average.

Overall, multiple top-tier advisors are retained by large firms in large deals. Multiple top-tier advisors spend more time than a single top-tier advisor to help their clients complete deals. This result is not difficult to interpret, since the interaction between advisors increase the deal complexity (Hunter and Jagtiani, 2003), and large deals are more complex to conduct. Importantly, multiple top-tier advisors help their clients pay lower bid premiums than a single top-tier advisor would. Additionally, deals advised by multiple top-tier advisors generate significantly lower target premiums, compared to deals advised by a single top-tier advisor. These results suggest that multiple top-tier advisors can cooperate effectively to improve acquirer bargaining power and secure more shares of synergy for their clients.

3.5.2. Regression Analysis

Since univariate tests do not take the interaction of alternative variables into consideration, the results could be unreliable. To examine the net effects of the two key explanatory variables, *TopTier* and *No. of TopTier*, multivariate regressions are conducted. Subsequently, this chapter examines how top-tier advisors influence takeover premiums, advisory fees and time-to-completion.

3.5.2.1. Takeover Premiums

3.5.2.1.1. Bid Premium

Table 3.4 presents the results of regression analysis of bid premium (4w). Specifications 1 and 2 represent the regressions of bid premium on the *TopTier* dummy. Specifications 3 and 4 represent the regressions of bid premium on the variable *No. of TopTier*. Specifications 5 and 6 represent the regressions of bid premium on the *InHouse* dummy. In specifications 1, 3, and 5, deal characteristics are controlled for. In specifications 2, 4, and 6, in addition to deal characteristics, acquirer firm characteristics are controlled for.

[Insert Table 3.4 here]

In specifications 1 and 2, the coefficients on the *TopTier* dummy are significantly negative, indicating that acquirers advised by top-tier advisors pay lower bid premiums to targets. Lower premiums suggest that acquirers can gain higher portions of synergies. After firm and deal characteristics are controlled for, top-tier advisors help acquirers lower bid premiums by 4.09%.

In specifications 3 and 4, the coefficients on the variable *No. of TopTier* are also significantly negative, indicating that an increase in the number of top-tier advisors retained is associated with a decrease in bid premium paid. These results are consistent with the previous results of a univariate test that acquirers advised by multiple top-tier advisors pay lower bid premium than acquirers advised by a single top-tier advisor. The empirical evidence suggests that multiple top-tier advisors can work collectively to enhance their clients' barraging power. In other words, multiple top-tier advisors do not suffer from social loafing, but cooperate effectively, thereby improving performance.

In specifications 5 and 6, the *InHouse* dummy is insignificant, indicating that acquirers who conduct in-house deals do not pay lower bid premiums. In other words, in-house acquirers cannot gain bargaining advantage in the negotiation process.

Interestingly, the coefficients on the variable *No. of Advisors* are significantly negative in specifications 1, 2, 5, and 6, but insignificant in specifications 3 and 4. In other words, the variable *No. of Advisors* loses its significance in the presence of the variable *No. of TopTier*, indicating that the significant results of the variable *No. of Advisors* in specifications 1, 2, 5 and 6 are driven by the effects of the variable *No. of TopTier*. The empirical evidence suggests that the retention of more advisors does not contribute to the reduction of bid premium, whereas top-tier advisors play the pivotal role in helping their clients gain stronger bargaining power in negotiation processes, thereby paying a lower premium. The direct comparison between the variable *No. of Advisors* and the variable *No. of TopTier* reflects that top-tier advisors rather than non-top-tier advisors have superior skills and can cooperate effectively.

Furthermore, the variable *Ln(TV)* is significantly negative in specifications 2, 4, 5 and 6, indicating that bid premiums are lower when the transaction value is large in absolute terms. By comparison, the variable *Relative Size* is significantly positive in specifications 2, 4 and 6, indicating that target firms have stronger bargaining power when the relative size of deal is large, and therefore charge higher bid premiums. The *Cash* dummy and the *Stock* dummy are significantly negative in all of the specifications, indicating that acquirers in all-cash and all-stock deals pay lower bid premiums compared to acquirers in mixed paid deals. One possible explanation is that targets prefer all-cash or all-stock payments to mix payments, and therefore allow for a lower bid premium. The *Hostile* dummy is significantly positive in all the specifications, indicating that acquirers pay a higher bid premium in hostile deals. To complete hostile deals, acquirers pay about 10.89% to 12.38% higher bid premiums than acquirers in friendly deals. The *Competing Bid* dummy is significantly positive in all the specifications, indicating that acquirers need to pay higher premiums when multiple bidders are competing to win the bidding. Bid competition lowers the bargaining power of acquirers, but enhances the bargaining power of targets. To win the bidding, acquirers have to pay about 14.05% to 14.96% higher premiums, compared to acquirers of the mergers where there is a sole bidder. The *Diversification* dummy is significantly positive, indicating that acquirers pay higher bid premiums in diversifying deals. Diversification implies that acquirers expand their business in a new area that they are unfamiliar with. In such a situation, targets are more likely to charge higher premiums. Acquirers pay about 4.08% to 5.50% higher bid premiums in diversifying deals. The Tender Offer dummy is insignificant, suggesting that there is no significant difference in bid premiums between tender offers and mergers. Officer (2003) suggests that acquirers pay higher bid premiums in tender offers. However, Officer (2003) examines deals over the period 1988 to 2000, whereas this research analyses deals with the period from 1990 to 2012. In other words, the inconsistent results

may be driven by differences in the sample periods. The results also suggest that acquirers did not pay higher premiums during the 2000s.

In addition, the variable *Ln(MV)* is significantly positive in all the specifications, indicating that large acquirers pay higher bid premiums. The result suggests that large firms are willing to acquire targets at a premium to achieve deal success. Initially, this chapter predicts that more experienced acquirers are more professional and are more likely to gain an advantage in negotiations, thereby paying lower bid premiums. However, the variable *Past Experience* is insignificant, indicating that experienced acquirers do not gain bargaining advantage. The variable *Pre-deal Ownership* is significantly negative in specification 6, indicating that acquirers that own a greater proportion of target stocks prior to acquisition pay lower bid premiums. It is reasonable that acquirers with higher pre-deal ownership have greater bargaining power.

Tables 3.5 and 3.6 present the results of regression analysis of bid premium (1w) and bid premium (1d), respectively. In both tables, the coefficients on the *TopTier* dummy are significantly negative, which suggests that the retention of top-tier advisors can help acquirers minimize bid premiums. More specifically, acquirers advised by top-tier advisors pay a 3.16% lower bid premium (1w) and a 3.63% lower bid premium (1d) than acquirers advised by non-top-tier advisors, after controlling for deal and firm characteristics. Furthermore, the coefficients on the variable *No. of TopTier* are also significantly positive, suggesting that the more top-tier advisors are retained, the lower the bid premiums paid are. These results reflect the superior skills of top-tier financial advisors and effective cooperation of multiple top-tier advisors.

[Insert Table 3.5 and Table 3.6 here]

In addition to the two key explanatory variables – *TopTier* and *No. of TopTier* – the results of other independent variables in Tables 3.5 and 3.6 are consistent with their results in Table 3.4. Overall, these results are not sensitive to the different measures of bid premiums.

3.5.2.1.2. Target Premium

This chapter uses target cumulative abnormal returns around announcement as the proxy of target premium. Higher target premiums imply lower proportions of synergies gained by acquirers. Table 3.7 presents the results of the regression analysis of target CAR [-1, 1]. Specifications 1 and 2 represent the regressions of target CAR on the *TopTier* dummy. Specifications 3 and 4 represent the regressions of target CAR on the variable *No. of TopTier*. Specifications 5 and 6 represent the regressions of target CAR on the *InHouse* dummy. In specifications 1, 3, and 5, deal characteristics are controlled for. In specifications 2, 4, and 6, deal characteristics and acquirer firm characteristics are controlled for.

[Insert Table 3.7 here]

In specifications 1 and 2, the *TopTier* dummy is significantly negative, indicating that deals advised by top-tier advisors (acquirer side) generate lower target announcement returns. Specifically, the retention of top-tier advisors lowers target three-day announcement abnormal returns by 1.86%, after deal and firm characteristics are controlled for. Therefore, the results suggest that top-tier advisors can help their acquirer clients minimize target premium.

In specifications 3 and 4, the coefficients on the variable *No. of TopTier* are significantly negative, which suggest that an increase in the number of top-tier advisors retained by acquirers leads to a decrease in target announcement returns. In other words, multiple top-tier advisors effectively lower target premium, which is in the interest of acquirers.

In specifications 5 and 6, the insignificant coefficients on the *InHouse* dummy suggest that deals with in-house expertise do not generate lower target premiums.

In addition, the variable *Relative Size* is significantly negative in all the specifications, indicating that large deals generate lower target premium. The *Stock* dummy is significantly negative, which suggest that all-stock deal generate lower target premium than all-cash deals. The *hostile* dummy is significantly positive in all the specifications, indicating that hostile deals generate lower target premiums than friendly deals. The variable *Diversification* is significantly positive in all the specifications, suggesting that diversifying deals generate higher premiums than acquisitions of targets in the same industry. The variable *Ln(MV)* is significantly positive in specifications 1 and 3, which indicate that deals made by large firms generate higher target premiums. The variable pre-deal ownership is significantly negative in all the specifications, suggesting that the higher the proportion of target shares owned by acquirers prior to acquisition, the lower the target premium generated.

Overall, the results of target CARs are consistent with the results of bid premiums, suggesting that top-tier advisors can help their clients secure more shares of synergies and multiple top-tier advisors can cooperate effectively to improve performance.

3.5.2.2. Acquirer Total Advisory Fees

Table 3.8 presents the results of regression analysis of acquirer total advisory fees. Specifications 1 and 2 represent the regressions of acquirer total advisory fees on the *Top-Tier* dummy, and Specifications 3 and 4 represent the regressions of acquirer total advisory fees on the variable *No. of TopTier*. In specifications 1 and 3, deal characteristics are controlled for. In specifications 2 and 4, both deal characteristics and acquirer firm characteristics are controlled for.

[Insert Table 3.8 here]

In specifications 1 and 2, the coefficients on the *TopTier* dummy are significantly positive, suggesting acquirers that retain top-tier advisors will pay higher total advisory fees. In specifications 3 and 4, the coefficients on the variable *No. of TopTier* is significantly positive, indicating that the more top-tier advisors are retained by acquirers, the more total advisory fees are paid by acquirers. It is reasonable that prestigious investment banks charge higher advisory fees. In addition, the variable *No. of Advisors* is significantly positive in all of the specifications, suggesting that an increase in the number of advisors retained leads to greater total advisory fees to pay.

Furthermore, both the variable *Ln(TV)* and the variable *Relative Size* are significantly positive in all of the specifications, indicating that acquirers pay higher advisory fees when deals are large. Additionally, the *Hostile* dummy is significantly positive in all of the specifications, which suggests that acquirers pay higher advisory fees for hostile deals than friendly deals. Indeed, large deals are more complex than small deals, and hostile deals are more complex than friendly deals. It is reasonable that advisors charge higher advisory fees for deals with greater complexity. The variable *Past Experience* is

significantly negative in all of the specifications, indicating that more experienced acquirers pay lower advisory fees.

3.5.2.3. Time to Completion

Table 3.9 presents the results of regression analysis of time-to-completion. Specifications 1 and 2 represent the regression of time-to-completion on the *Top-Tier* dummy. Specifications 3 and 4 represent the regression of time-to-completion on the variable *No. of TopTier*. Specifications 5 and 6 represent the regression of time-to-completion on the *InHouse* dummy. In specifications 1, 3, and 5, deal characteristics are controlled for. In specifications 2, 4, and 6, both deal characteristics and acquirer firm characteristics are controlled for.

[Insert Table 3.9 here]

In specifications 1 and 2, the coefficients on the *TopTier* dummy is insignificant, indicating that top-tier advisors do not spend less time than non-top-tier advisors helping their clients complete deals. Similarly, in specifications 3 and 4, the coefficient on the variable *No. of TopTier* is also insignificant, indicating that an increase in top-tier advisors retained does not significantly shorten or extend time-to-completion. If top-tier advisors have superior skills, they will be able to complete deals in a shorter time than non-top-tier advisors. However, the insignificant coefficients on the *TopTier* dummy and the variable *No. of TopTier* suggest that top-tier advisors work diligently.

In specification 5 and 6, the coefficient on *InHouse* dummy is significantly positive, indicating that in-house acquirers take longer than acquirers advised by investment banks to complete deals. This chapter also calculated the marginal effects of the *InHouse* dummy.

Specifically, in-house acquirers take 21.50 more days to complete deals compared to acquirers advised by banks, after controlling for deal and firm characteristics. This result is not difficult to explain, since financial advisors are more professional at making M&A deals compared to acquirers with in-house expertise.

Additionally, the variable *No. of Advisors* is significantly positively related to time-to-completion in all of the specifications, suggesting that the more the advisors retained, the longer the time used to complete the deals. The result is consistent with Hunter and Jagtiani (2003). They explain this phenomenon by saying that retaining more advisors implies that a deal is more complex.

Furthermore, the variable *Relative Size* is significantly positive in all of the specifications, indicating that acquirers take more time to complete large deals than small deals. Both the *Cash* dummy and *Stock* dummy are significantly negative, indicating that acquirers take less time on all-cash deals and all-stock deals than mixed paid deals. The *Hostile* dummy is significantly positive, indicating that acquirers use more time to complete hostile acquisition than friendly acquisition. The *Competing Bid* dummy is significantly positive, indicating that acquirers spend more time on the deals with bid competition. The variable *Tender Offer* is significantly negative, indicating that acquirers take less time conducting a tender offer. In fact, large targets, mixed payments, hostile attitude, and multiple bidder contests render acquisitions more complex and time-consuming.

Interestingly, the variable *Pre-deal Ownership* is significantly positive in all of the specifications, which suggests that acquirers with higher pre-deal ownership use more time to complete deals. The variable *Past Experience* is insignificant in all of the specifications. Initially, this chapter predicted that more experienced acquirers are more

skilful and therefore could take less time to complete deals. However, more experienced acquirers do not significantly shorten the time-to-completion. The result suggests that more experienced acquirers are careful about due diligence and negotiations.

3.5.3. Discussion

Top-tier advisors can help acquirers pay a lower bid premium. Acquirers advised by multiple top-tier advisors even pay much lower bid premium than acquirers advised by a single top-tier advisor. These results suggest that top-tier advisors can help their clients to obtain a bargaining advantage in negotiation process. However, deals advised by top-tier investment banks require significantly higher total advisory fees. Hence, there is concern that overpayment could offset cost reduction in bid premium. In particular, the concern of overpayment will be more serious when multiple top-tier advisors are retained. Therefore, this chapter examines whether cost reduction in bid premiums can cover premium advisory fees.

3.5.3.1. Deals Advised by Top-Tier Advisors versus Deals Advised by Non-Top-Tier Advisors

Table 3.10 shows abnormal bid premium, abnormal acquirer total advisor fees, and acquirer cost reduction for deals advised by top-tier and non-top-tier advisors, and univariate comparison between deals advised by top-tier and non-top-tier advisors.

[Insert Table 3.10 here]

Panel A presents abnormal bid premium. On average, transaction value-adjusted, relative size-adjusted, acquirer size-adjusted, acquirer industry-adjusted, and target industry-adjusted abnormal bid premiums are -1.63 (p=0.100), -3.72% (p=0.000), -2.51%

(p=0.012), -3.61% (p=0.000), and -4.02% (p=0.000), respectively. The result suggests that acquirers advised by top-tier advisors pay significantly lower bid premiums than the reference groups, regardless of how the reference groups are constructed. In contrast, all of the mean abnormal bid premiums for deals advised by non-top-tier advisors are statistically insignificant. Specifically, the mean transaction value-adjusted, relative size-adjusted, acquirer size-adjusted, acquirer industry-adjusted, and target industry-adjusted abnormal bid premiums are -1.03 (p=0.398), -0.28% (p=0.815), -0.22% (p=0.855), -1.21% (p=0.313), and 1.67% (p=0.163), respectively. The result indicates that acquirers advised by non-top-tier advisors do not pay significantly lower bid premiums than the reference groups. As a consequence, acquirers advised by top-tier advisors pay significantly lower relative size-adjusted, acquirer size-adjusted, acquirer industry-adjusted and target industry-adjusted abnormal bid premiums by 4.01% (p=0.011), 2.73% (p=0.083), 4.82% (p=0.002), and 5.69 (p=0.000), respectively. In addition, median abnormal bid premiums for deals advised by top-tier and non-top-tier advisors are significantly negative, regardless of how the reference portfolios are constructed. However, the median relative size-adjusted, acquirer industry-adjusted and target industry-adjusted abnormal bid premiums for deals advised by top-tier advisors are significantly lower than those for deals advised by non-top-tier advisors. Overall, the above results are consistent with the regression analysis that acquirers advised by top-tier advisors pay lower bid premiums than acquirers advised by non-top-tier advisors.

Panel B presents abnormal total advisory fees for acquirers. Regardless of how the reference portfolios are constructed, all of the mean abnormal total advisory fees for acquirers are significantly positive, suggesting that acquirers advised by top-tier advisors pay higher advisory fees than the reference group. In contrast, every median abnormal total advisory fee is significantly negative except for the insignificant median acquirer

size-adjusted abnormal total advisory fees, suggesting that non-top-tier advisors pay lower advisory fees than the reference groups. Consequently, acquirers advised by top-tier advisors pay significantly higher advisory fees than acquirers advised by non-top-tier advisors on average. Specifically, the difference in mean transaction value-adjusted, relative size-adjusted, acquirer size-adjusted, acquirer industry-adjusted, and target industry-adjusted abnormal total advisory fees between deals advised by top-tier and non-top-tier advisors are $1.13 million (p=0.000), $4.64 million (p=0.000), $1.70 million (p=0.000), $3.51 million (p=0.000), and $3.48 million (p=0.000), respectively. In addition, the results on median values show the similar pattern. These results are consistent with the regression analysis that deals advised by top-tier advisors require higher advisory fees, compared to deals advised by non-top-tier advisors.

Panel C presents cost reduction for acquirers. Based on transaction value, relative size, acquirer size, acquirer industry, and target industry reference groups, the mean (median) acquirer advised by top-tier advisors significantly reduces cost by $122.74 million ($27.67 million), $199.23 million ($36.16 million), $167.94 million ($29.34 million), $158.83 million ($18.25 million), and $181.48 million ($22.85 million), respectively, compared to acquirers advised by non-top-tier advisors. Therefore, top-tier advisors can help their acquirer clients greatly lower bid premium, although top-tier advisors charge much higher advisory fees. The savings in bid premium are significantly greater than expenses in advisory fees. Consequently, the retention of top-tier advisors leads to cost reduction.

3.5.3.2 Deals Advised by Multiple Top-Tier Advisors versus Deals Advised by A Single Top-Tier Advisor

Table 3.11 shows abnormal bid premium, abnormal acquirer total advisor fees, and acquirer cost reduction for deals advised by multiple top-tier advisors and a single top-tier

advisor, and univariate comparison between deals advised by multiple top-tier advisors and a single top-tier advisor.

[Insert Table 3.11 here]

Panel A presents abnormal bid premium. On average, acquirers advised by multiple top-tier advisors pay 7.59% (p=0.001) lower transaction value-adjusted, 10.74% (p=0.000) lower relative-size adjusted, 11.94% (p=0.000) lower acquirer size-adjusted, 9.65% (p=0.000) lower acquirer industry-adjusted, and 11.84% (p=0.000) lower target industry-adjusted abnormal bid premiums, compared to acquirers advised by a single top-tier advisor. In addition, the median acquirer advised by multiple top-tier advisors pay 5.23% (p=0.008) lower relative-size adjusted, 6.68% (p=0.001) lower acquirer size-adjusted, 4.81% (p=0.017) lower acquirer industry-adjusted, and 9.42% (p=0.000) lower target industry-adjusted abnormal bid premiums, compared to median acquirers advised by a single top-tier advisor. These results are consistent with the regression analysis that the more top-tier advisors are retained, the lower the bid premiums paid.

Panel B presents abnormal total advisory fees for acquirers. Regardless of how reference portfolios are constructed, acquirers advised by multiple top-tier advisors pay significantly higher abnormal total advisory fees than acquirers advised by a single top-tier advisor. Specifically, the difference in mean (median) transaction value-adjusted, relative size-adjusted, acquirer size-adjusted, acquirer industry-adjusted and target-industry adjusted abnormal total advisory fees between deals advised by multiple top-tier advisors and single top-tier advisor are $4.46 million ($4.70 million), $7.77 million ($9.05 million), $3.94 million ($3.46 million), $5.58 million ($5.95 million), and $4.91 million ($4.93 million), respectively. These results are consistent with the regression analysis that

acquirer total advisory fees are positively related to the number of top-tier advisors retained.

Panel C presents cost reduction for acquirers. Based on transaction value, relative size, acquirer size, acquirer industry, and target industry reference groups, the mean (median) acquirer advised by multiple top-tier advisors significantly reduce cost by $371.78 million ($166.41 million), $599.17 million ($348.17 million), $555.69 million ($378.48 million), $511.73 million ($205.39 million), and $567.52 million ($270.84 million), respectively, compared to acquirers advised by a single top-tier advisor. These results indicate that the retention of multiple top-tier advisors leads to cost reduction rather than overpayment.

3.5.4. Robustness Test

This chapter address the robustness of results as follows.

3.5.4.1. Takeover Premium

To examine whether the results are robust, this chapter uses different measures of takeover premiums. Specifically, this chapter calculates bid premium of offer price to target price four weeks prior to the announcement, bid premium of offer price to target price one week prior to the announcement, and bid premium of offer price to target price one day prior to the announcement. In addition, this chapter uses target announcement CARs as the proxy of target premium, and calculates target CARs by using different event windows and valuation models. In addition to target CAR [-1, 1], this chapter also calculates target CARs over the [-2, 2] and [-5, 5] windows and measure the target CARs by using the market-adjusted return model, the Fama-French three-factor model (Fama and French, 1993), and the Fama-French-momentum four-factor model (Fama and French, 1993; Carhart, 1997). The results are not sensitive to these variations.

3.5.4.2. Financial Advisor Classification

In the same vein as the previous chapter, this chapter also evaluates whether the results are sensitive to different financial advisor classifications. Specifically, this chapter uses the top-five cut-off point by following the method of Rau (2000), the top-eight cut-off point by following the method of Golubov, Petmezas and Travlos (2012), and the top-fifteen cut-off point by following the method of Hunter and Jagtiani (2003). The results are robust to these classifications.

3.5.4.3. Other Issues

To control for the impact of outliers, this chapter also winsorizes all of the continuous variables at different levels, such as 1% and 99%, 3% and 97%, and 5% and 95%. In terms of sample selection, this chapter adds the restriction on regulated industries – financial firms (SIC codes 6000–6999) and utility firms (SIC codes 4900–4999). In addition to Tobit regression of advisory fees and negative binomial regression of time-to-completion, this chapter also applies OLS regression to examine the effects of top-tier advisors on total advisory fees and time-to-completion, and conduct Poisson regression of time-to-completion. To calculate abnormal bid premium, abnormal total advisory fees, and cost reduction, this chapter also constructs the reference portfolios by using transaction value deciles, relative size deciles, and acquirer market value deciles. However, the results are not sensitive to the variations mentioned above.

3.6. Conclusion

This chapter explores whether top-tier financial advisors can help their acquirer clients enhance bargaining power, thereby minimizing takeover premiums. This chapter is also

interested in whether multiple top-tier advisors suffer from social loafing or can cooperate effectively in deal negotiations.

Finally, this chapter finds that advisor reputation has a significant effect on takeover premiums. More specifically, through the retention of top-tier advisors, acquirers lower bid premiums (measured using target price four weeks prior to announcement) by 4.09%, after deal and firm characteristics are controlled for. In addition, an increase in the number of top-tier advisors retained by acquirers leads to a decrease in bid premiums. In other words, acquirers are advised by multiple top-tier advisors to pay lower bid premiums than acquirers advised by a single top-tier advisor. Interestingly, the number of advisors retained by acquirers loses its significance in the presence of the number of top-tier advisors. The direct comparison between the coefficients on the number of top-tier advisors and the number of advisors highlights top-tier advisors' superior ability to help their clients enhance bargaining power.

In addition, acquirers advised by top-tier advisors do not take less time to complete deals, compared to acquirers advised by non-top-tier advisors. The result suggests that top-tier advisors work diligently.

This chapter also confirms that advisor reputation is positively related to acquirer advisory fees. Specifically, acquirers advised by top-tier advisors pay significantly higher advisory fees than acquirers advised by non-top-tier advisors, and acquirers advised by multiple top-tier advisors pay significantly higher advisory fees than acquirers advised by a single top-tier advisor. These results raise the concern that negative effects of overpayment in advisory fees could offset positive effects of takeover premium reduction. To address this issue, this chapter defines cost reduction as the difference between decreases in cost of

takeover premiums and increases in cost of advisory fees. Finally, this chapter finds that top-tier advisors greatly contribute to cost reduction. Specifically, acquirers advised by top-tier advisors reduce cost by about $122.74 million to $199.23 million on average, compared to acquirers advised by non-top-tier advisors. Acquirers advised by multiple top-tier advisors reduce cost about $371.78 million to $567.52 million on average, compared to acquirers advised by a single top-tier advisor.

This chapter also pays attention to in-house deals. The results suggest that in-house acquirers cannot lower takeover premiums and spend more time to complete deals. Therefore, compared to in-house expertise, financial advisors are more professional in deal negotiations.

Overall, the retention of top-tier advisors improves acquirer bargaining power. Multiple top-tier advisors do not suffer from social loafing. Instead, they can cooperate effectively to negotiate favourable deals for their clients.

Table 3.1 Summary statistics for the entire sample

This table presents summary statistics for the entire sample and univariate comparison between deals advised by investment banks and in-house deals. Panel A reports deal characteristics. Bid premium (4w) is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement. Bid premium (1w) is calculated as the difference between the deal price and the target's stock price 1 week prior to the announcement divided by the target's stock price 1 week prior to the announcement. Bid premium (1d) is calculated as the difference between the deal price and the target's stock price 1 day prior to the announcement divided by the target's stock price 1 day prior to the announcement. Target CAR [-1, 1] is the 3-day target cumulative abnormal returns around announcement calculated by using market model, respectively. Time-to-completion is measured as the number of days between announcement and effective date. Transaction Value is the value of the deal. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Private dummy equals one if the target is a private firm. Subsidiary dummy equals one if the target is a subsidiary firm. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Mixed dummy equals one if the deal is mixed paid by both stock and cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Panel B reports acquirer firm characteristics. MV is market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Panel C reports financial advisor related information. No. of advisors is the number of financial advisors retained by an acquirer. Acquirer total advisory fees, obtained from Thomson One Banker, is the total advisory fees paid by an acquirer to all the financial advisors retained. P-Values are shown in parentheses (the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	All			Advisor (A)			In-House (I)			Difference (A – I)			
										Mean		Median	
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Deal Characteristics													
Bid Premium (4w)	46.32%	33.29%	3430	45.91%	33.15%	3188	51.73%	35.65%	242	-5.83%	(0.297)	-2.50%*	(0.068)
Bid Premium (1w)	40.58%	28.84%	3430	40.35%	28.65%	3188	43.68%	31.17%	242	-3.33%	(0.451)	-2.52%*	(0.090)
Bid Premium (1d)	35.77%	25.01%	3430	35.57%	24.73%	3188	38.40%	26.30%	242	-2.83%	(0.502)	-1.57%	(0.316)
Target CAR [-1,1]	19.41%	14.88%	3081	19.08%	14.49%	2862	23.75%	18.09%	219	-4.67%**	(0.016)	-3.60%**	(0.012)
Time-to-Completion	135.79	119.00	3430	135.21	118.00	3188	143.36	134.00	242	-8.14	(0.122)	-16.00***	(0.002)
Transaction value ($ mil.)	1631.94	261.58	3430	1724.65	287.33	3188	410.68	93.01	242	1313.97***	(0.000)	194.32***	(0.000)
Relative Size	0.43	0.23	3430	0.46	0.26	3188	0.11	0.05	242	0.35***	(0.000)	0.21***	(0.000)
All Stock Deals	41.11%	-	3430	39.71%	-	3188	59.50%	-	242	-19.79%***	(0.000)	-	-
All Cash Deals	28.89%	-	3430	29.08%	-	3188	26.45%	-	242	2.63%	(0.374)	-	-
Mixed Deals	30.00%	-	3430	31.21%	-	3188	14.05%	-	242	17.16%***	(0.000)	-	-
Hostile	1.43%	-	3430	1.51%	-	3188	0.41%	-	242	1.09%**	(0.020)	-	-
Competing Bid	3.41%	-	3430	3.58%	-	3188	1.24%	-	242	2.34%***	(0.003)	-	-
Tender Offer	22.97%	-	3430	23.53%	-	3188	15.70%	-	242	7.82%***	(0.002)	-	-
Diversification	29.36%	-	3430	29.42%	-	3188	28.51%	-	242	0.91%	(0.763)	-	-
Panel B: Firm Characteristics													
MV ($ mil.)	11341.11	1473.85	3430	10458.01	1388.61	3188	22974.56	2728.54	242	-12516.54***	(0.002)	-1339.93***	(0.000)
M/B	6.61	2.38	2539	6.70	2.34	2355	5.51	3.12	184	1.20	(0.528)	-0.78***	(0.000)
Leverage	0.38	0.37	2526	0.38	0.36	2343	0.41	0.43	183	-0.03	(0.102)	-0.07**	(0.033)
Cash Flows/Equity	0.06	0.05	2384	0.06	0.05	2204	0.05	0.05	180	0.02	(0.217)	0.01*	(0.066)
RUNUP	13.09%	8.10%	3241	13.62%	8.19%	3011	6.10%	7.67%	230	7.52%***	(0.004)	0.52%**	(0.045)
Pre-deal Ownership	2.79%	0.00%	3430	2.86%	0.00%	3188	1.89%	0.00%	242	0.97%	0.167	0.00	0.423

Past Experience	8.40	5.00	3430	7.89	5.00	3188	15.12	11.00	242	-7.23***	(0.000)	-6.00***	(0.000)
Panel C: Financial Advisors													
Total Advisory Fees	3.95	1.00	1450	4.75	1.70	1208	-	-	242	-	-	-	-
Number of Advisors	1.11	1.00	3430	1.20	1.00	3188	-	-	242	-	-	-	-

Table 3.2: Summary statistics for the sample of deals advised by investment banks

This table presents summary statistics for the sample of deals advised by investment banks and univariate comparison between deals advised by top-tier and non-top-tier advisors. Panel A reports deal characteristics. Bid premium (4w) is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement. Bid premium (1w) is calculated as the difference between the deal price and the target's stock price 1 week prior to the announcement divided by the target's stock price 1 week prior to the announcement. Bid premium (1d) is calculated as the difference between the deal price and the target's stock price 1 day prior to the announcement divided by the target's stock price 1 day prior to the announcement. Target CAR [-1, 1] is the 3-day target cumulative abnormal returns around announcement calculated by using market model, respectively. Time-to-completion is measured as the number of days between announcement and effective date. Transaction Value is the value of the deal. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Private dummy equals one if the target is a private firm. Subsidiary dummy equals one if the target is a subsidiary firm. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Mixed dummy equals one if the deal is mixed paid by both stock and cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Panel B reports acquirer firm characteristics. MV is market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Panel C reports financial advisor related information. No. of advisors is the number of financial advisors retained by an acquirer. Acquirer total advisory fees, obtained from Thomson One Banker, is the total advisory fees paid by an acquirer to all the financial advisors retained. P-Values are shown in parentheses (the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	Advisor			Top-Tier (T)			Non-Top-Tier (N)			Difference (T – N)			
										Mean		Median	
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Deal Characteristics													
Bid Premium (4w)	45.91%	33.15%	3188	44.98%	32.50%	1717	46.99%	34.14%	1471	-2.01%	(0.574)	-1.64%*	(0.055)
Bid Premium (1w)	40.35%	28.65%	3188	40.14%	27.91%	1717	40.60%	29.47%	1471	-0.46%	(0.886)	-1.56%**	(0.033)
Bid Premium (1d)	35.57%	24.73%	3188	35.34%	23.90%	1717	35.84%	25.97%	1471	-0.50%	(0.865)	-2.07%**	(0.042)
Target CAR [-1,1]	19.08%	14.49%	2862	19.48%	14.71%	1575	18.58%	14.11%	1287	0.90%	(0.288)	0.60%	(0.414)
Time-to-Completion	135.21	118.00	3188	133.32	110.00	1717	137.41	127.00	1471	-4.09	(0.211)	-17.00***	(0.000)
Transaction value ($ mil.)	1724.65	287.33	3188	2692.27	627.47	1717	595.21	106.88	1471	2097.06***	(0.000)	520.58***	(0.000)
Relative Size	0.46	0.26	3188	0.41	0.21	1717	0.51	0.30	1471	-0.10***	(0.002)	-0.09***	(0.000)
All Stock Deals	39.71%	-	3188	33.61%	-	1717	46.84%	-	1471	-13.23%***	(0.000)	-	-
All Cash Deals	29.08%	-	3188	32.03%	-	1717	25.63%	-	1471	6.40%***	(0.000)	-	-
Mixed Deals	31.21%	-	3188	34.36%	-	1717	27.53%	-	1471	6.83%***	(0.000)	-	-
Hostile	1.51%	-	3188	2.10%	-	1717	0.82%	-	1471	1.28%***	(0.002)	-	-
Competing Bid	3.58%	-	3188	4.19%	-	1717	2.86%	-	1471	1.34%**	(0.040)	-	-
Tender Offer	23.53%	-	3188	26.38%	-	1717	20.19%	-	1471	6.19%***	(0.000)	-	-
Diversification	29.42%	-	3188	31.33%	-	1717	27.19%	-	1471	4.14%***	(0.010)	-	-
Panel B: Firm Characteristics													
MV ($ mil.)	10458.01	1388.61	3188	15985.49	3432.26	1717	4006.16	432.00	1471	11979.33***	(0.000)	3000.26***	(0.000)
M/B	6.70	2.34	2355	8.06	2.54	1281	5.08	2.07	1074	2.99	(0.376)	0.47***	(0.000)
Leverage	0.38	0.36	2343	0.37	0.35	1276	0.39	0.39	1067	-0.02	(0.103)	-0.04	(0.202)
Cash Flows/Equity	0.06	0.05	2204	0.06	0.06	1197	0.06	0.05	1007	0.00	(0.859)	0.01***	(0.000)
RUNUP	13.62%	8.19%	3011	12.43%	7.75%	1619	15.00%	8.79%	1392	-2.57%	(0.117)	-1.04%	(0.249)
Pre-deal Ownership	2.86%	0.00%	3188	3.57%	0.00%	1717	2.03%	0.00%	1471	1.54%	0.001	0.00	0.004

Past Experience	7.89	5.00	3188	9.80	7.00	1717	5.65	3.00	1471	4.15***	(0.000)	4.00***	(0.000)
Panel C: Financial Advisors													
Total Advisory Fees	4.75	1.70	1208	7.90	4.00	574	1.89	0.75	634	6.01***	(0.000)	3.25***	(0.000)
Number of Advisors	1.20	1.00	3188	1.30	1.00	1717	1.08	1.00	1471	0.23***	(0.000)	0.00***	(0.000)

Table 3.3: Summary statistics for the sample of deals advised by top-tier investment banks

This table presents summary statistics for the sample of deals advised by top-tier investment banks and univariate comparison between deals advised by single top-tier and multiple top-tier advisors. Panel A reports deal characteristics. Bid premium (4w) is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement. Bid premium (1w) is calculated as the difference between the deal price and the target's stock price 1 week prior to the announcement divided by the target's stock price 1 week prior to the announcement. Bid premium (1d) is calculated as the difference between the deal price and the target's stock price 1 day prior to the announcement divided by the target's stock price 1 day prior to the announcement. Target CAR [-1, 1] is the 3-day target cumulative abnormal returns around announcement calculated by using market model, respectively. Time-to-completion is measured as the number of days between announcement and effective date. Transaction Value is the value of the deal. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Private dummy equals one if the target is a private firm. Subsidiary dummy equals one if the target is a subsidiary firm. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Mixed dummy equals one if the deal is mixed paid by both stock and cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Panel B reports acquirer firm characteristics. MV is market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Panel C reports financial advisor related information. No. of advisors is the number of financial advisors retained by an acquirer. Acquirer total advisory fees, obtained from Thomson One Banker, is the total advisory fees paid by an acquirer to all the financial advisors retained. P-Values are shown in parentheses (the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	Top-Tier			Multiple Top-Tier (MT)			Single Top-Tier (ST)			Difference (MT – ST)			
										Mean		Median	
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	P-Value	Median	P-Value
Panel A: Deal Characteristics													
Bid Premium (4w)	44.98%	32.50%	1717	27.65%	27.47%	189	47.13%	33.33%	1528	-19.48%***	(0.000)	-5.86%***	(0.000)
Bid Premium (1w)	40.14%	27.91%	1717	24.80%	22.63%	189	42.03%	28.53%	1528	-17.23%***	(0.000)	-5.90%***	(0.000)
Bid Premium (1d)	35.34%	23.90%	1717	22.57%	19.63%	189	36.92%	24.47%	1528	-14.35%***	(0.000)	-4.84%***	(0.004)
Target CAR[-1,1]	19.48%	14.71%	1575	13.97%	9.87%	167	20.14%	15.45%	1408	-6.17%***	(0.000)	-5.59%***	(0.000)
Time-to-Completion	133.32	110.00	1717	157.30	132.00	189	130.36	108.00	1528	26.94***	(0.002)	24.00***	(0.001)
Transaction value ($ mil.)	2692.27	627.47	1717	7917.70	3130.88	189	2045.93	512.67	1528	5871.77***	(0.000)	2618.21***	(0.000)
Relative Size	0.41	0.21	1717	0.65	0.40	189	0.38	0.19	1528	0.27***	(0.000)	0.20***	(0.000)
All Stock Deals	33.61%	-	1717	20.63%	-	189	35.21%	-	1528	-14.57%***	(0.000)	-	-
All Cash Deals	32.03%	-	1717	27.51%	-	189	32.59%	-	1528	-5.08%	(0.145)	-	-
Mixed Deals	34.36%	-	1717	51.85%	-	189	32.20%	-	1528	19.65%***	(0.000)	-	-
Hostile	2.10%	-	1717	3.17%	-	189	1.96%	-	1528	1.21%	(0.362)	-	-
Competing Bid	4.19%	-	1717	6.88%	-	189	3.86%	-	1528	3.02%	(0.116)	-	-
Tender Offer	26.38%	-	1717	28.57%	-	189	26.11%	-	1528	2.46%	(0.481)	-	-
Diversification	31.33%	-	1717	23.28%	-	189	32.33%	-	1528	-9.05%***	(0.007)	-	-
Panel B: Firm Characteristics													
MV ($ mil.)	15985.49	3432.26	1717	22432.74	8828.10	189	15188.02	3120.94	1528	7244.71***	(0.006)	5707.16***	(0.000)
M/B	8.06	2.54	1281	2.05	2.40	126	8.72	2.55	1155	-6.67*	(0.076)	-0.15	(0.184)
Leverage	0.37	0.35	1276	0.41	0.41	126	0.37	0.35	1150	0.04*	(0.079)	0.06*	(0.071)
Cash Flows/Equity	0.06	0.06	1197	0.10	0.07	120	0.06	0.06	1077	0.04**	(0.037)	0.01***	(0.008)
RUNUP	12.43%	7.75%	1619	12.81%	13.17%	175	12.39%	7.33%	1444	0.42%	(0.875)	5.85%	(0.248)
Pre-deal Ownership	3.57%	0.00%	1717	2.19%	0.00%	189	3.74%	0.00%	1528	-1.56%	0.087	0.00	0.154

Past Experience	9.80	7.00	1717	10.56	7.00	189	9.71	6.00	1528	0.85	(0.309)	1.00	(0.182)
Panel C: Financial Advisors													
Total Advisory Fees	7.90	4.00	574	20.97	15.00	69	6.11	3.50	505	14.85***	(0.000)	11.50***	(0.000)
Number of Advisors	1.30	1.00	1717	2.41	2.00	189	1.16	1.00	1528	1.24***	(0.000)	1.00***	(0.000)

Table 3.4: OLS regressions of bid premium (4 weeks)

This table presents results of OLS regressions of bid premium. Bid premium is calculated as the difference between the deal price and the target's stock price 4 weeks prior to the announcement divided by the target's stock price 4 weeks prior to the announcement. In these models this chapter regresses bid premium against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include deal and firm characteristics. Ln(TV) is the natural logarithm of the transaction value. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. All continuous variables are winsorized at the 2% and 98% levels. This chapter also controls for acquirer and target industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
TopTier	-0.0324*	-0.0409**				
	(0.054)	(0.016)				
No. of TopTier			-0.0343**	-0.0419***		
			(0.022)	(0.006)		
InHouse					-0.0158	-0.0309
					(0.630)	(0.374)
No. of Advisors	-0.0280**	-0.0252*	-0.0133	-0.0073	-0.0286**	-0.0264**
	(0.032)	(0.051)	(0.405)	(0.646)	(0.028)	(0.041)
Ln(TV)	-0.0035	-0.0339***	-0.0027	-0.0335***	-0.0102**	-0.0308***
	(0.504)	(0.003)	(0.604)	(0.003)	(0.024)	(0.003)
Relative Size	0.0074	0.0771***	0.0059	0.0763**	0.0188	0.0635**
	(0.693)	(0.010)	(0.752)	(0.011)	(0.311)	(0.024)
Cash	-0.0654***	-0.0755***	-0.0657***	-0.0760***	-0.0634***	-0.0681***
	(0.002)	(0.000)	(0.002)	(0.000)	(0.002)	(0.001)
Stock	-0.0559***	-0.0506***	-0.0566***	-0.0512***	-0.0526***	-0.0485***
	(0.002)	(0.006)	(0.002)	(0.005)	(0.003)	(0.007)
Hostile	0.1089**	0.1180**	0.1103**	0.1200**	0.1118**	0.1238***
	(0.028)	(0.018)	(0.025)	(0.015)	(0.019)	(0.009)
Competing Bid	0.1496***	0.1455***	0.1488***	0.1445***	0.1432***	0.1405***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Tender Offer	-0.0070	-0.0026	-0.0062	-0.0015	-0.0027	-0.0002
	(0.749)	(0.905)	(0.777)	(0.944)	(0.901)	(0.994)
Diversification	0.0498***	0.0418***	0.0490***	0.0408**	0.0550***	0.0513***
	(0.002)	(0.010)	(0.002)	(0.012)	(0.000)	(0.001)
Ln(MV)		0.0327***		0.0331***		0.0214**
		(0.002)		(0.002)		(0.024)
Past Experience		-0.0003		-0.0003		-0.0005
		(0.698)		(0.694)		(0.490)
Pre-deal Ownership		-0.0961		-0.0993		-0.1291**
		(0.114)		(0.103)		(0.026)
Constant	0.5475***	0.4667***	0.5297***	0.4444***	0.5616***	0.5090***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	3188	3188	3188	3188	3430	3430
R^2	0.078	0.083	0.078	0.083	0.073	0.076
adj. R^2	0.062	0.066	0.062	0.067	0.061	0.063

Table 3.5: OLS regressions of bid premium (1 week)

This table presents results of OLS regressions of bid premium. Bid premium is calculated as the difference between the deal price and the target's stock price 1 week prior to the announcement divided by the target's stock price 1 week prior to the announcement. In these models this chapter regresses bid premium against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include deal and firm characteristics. Ln(TV) is the natural logarithm of the transaction value. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. All continuous variables are winsorized at the 2% and 98% levels. This chapter also controls for acquirer and target industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
TopTier	-0.0277*	-0.0316**				
	(0.059)	(0.032)				
No. of TopTier			-0.0325**	-0.0363***		
			(0.013)	(0.006)		
InHouse					0.0013	-0.0045
					(0.962)	(0.877)
No. of Advisors	-0.0262**	-0.0248**	-0.0120	-0.0090	-0.0267**	-0.0254**
	(0.015)	(0.020)	(0.365)	(0.494)	(0.012)	(0.017)
Ln(TV)	-0.0052	-0.0212**	-0.0041	-0.0206**	-0.0111***	-0.0157*
	(0.253)	(0.036)	(0.373)	(0.041)	(0.005)	(0.083)
Relative Size	0.0088	0.0441*	0.0069	0.0435*	0.0176	0.0247
	(0.576)	(0.086)	(0.660)	(0.090)	(0.265)	(0.314)
Cash	-0.0569***	-0.0626***	-0.0569***	-0.0628***	-0.0580***	-0.0580***
	(0.003)	(0.001)	(0.003)	(0.001)	(0.002)	(0.002)
Stock	-0.0661***	-0.0631***	-0.0669***	-0.0638***	-0.0630***	-0.0613***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Hostile	0.1458***	0.1521***	0.1473***	0.1539***	0.1478***	0.1571***
	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)
Competing Bid	0.1563***	0.1531***	0.1554***	0.1521***	0.1483***	0.1464***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tender Offer	-0.0087	-0.0059	-0.0079	-0.0050	-0.0072	-0.0063
	(0.651)	(0.758)	(0.679)	(0.795)	(0.699)	(0.738)
Diversification	0.0464***	0.0418***	0.0456***	0.0408***	0.0508***	0.0504***
	(0.001)	(0.004)	(0.001)	(0.005)	(0.000)	(0.000)
Ln(MV)		0.0151		0.0158		0.0030
		(0.113)		(0.100)		(0.724)
Past Experience		0.0006		0.0006		0.0005
		(0.418)		(0.424)		(0.509)
Pre-deal Ownership		-0.0747		-0.0767		-0.0999**
		(0.145)		(0.135)		(0.042)
Constant	0.5181***	0.4849***	0.5006***	0.4641***	0.5314***	0.5289***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	3188	3188	3188	3188	3430	3430
R^2	0.072	0.075	0.073	0.076	0.068	0.069
adj. R^2	0.056	0.058	0.057	0.059	0.056	0.057

Table 3.6: OLS regressions of bid premium (1 day)

This table presents results of OLS regressions of bid premium. Bid premium is calculated as the difference between the deal price and the target's stock price 1 day prior to the announcement divided by the target's stock price 1 day prior to the announcement. In these models this chapter regresses bid premium against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include deal and firm characteristics. Ln(TV) is the natural logarithm of the transaction value. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. All continuous variables are winsorized at the 2% and 98% levels. This chapter also controls for acquirer and target industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
TopTier	-0.0326**	-0.0363***				
	(0.017)	(0.007)				
No. of TopTier			-0.0352***	-0.0387***		
			(0.004)	(0.001)		
InHouse					0.0106	0.0070
					(0.692)	(0.804)
No. of Advisors	-0.0201*	-0.0190*	-0.0050	-0.0024	-0.0210**	-0.0198*
	(0.051)	(0.063)	(0.690)	(0.846)	(0.040)	(0.052)
Ln(TV)	-0.0015	-0.0160*	-0.0006	-0.0156	-0.0088**	-0.0116
	(0.730)	(0.096)	(0.885)	(0.105)	(0.022)	(0.176)
Relative Size	0.0021	0.0347	0.0005	0.0339	0.0128	0.0164
	(0.887)	(0.146)	(0.975)	(0.154)	(0.383)	(0.471)
Cash	-0.0462***	-0.0519***	-0.0465***	-0.0523***	-0.0503***	-0.0496***
	(0.009)	(0.003)	(0.008)	(0.003)	(0.003)	(0.004)
Stock	-0.0464***	-0.0439***	-0.0471***	-0.0445***	-0.0429***	-0.0415***
	(0.003)	(0.004)	(0.002)	(0.004)	(0.004)	(0.006)
Hostile	0.1472***	0.1516***	0.1487***	0.1534***	0.1500***	0.1581***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
Competing Bid	0.1413***	0.1386***	0.1406***	0.1376***	0.1363***	0.1347***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tender Offer	-0.0149	-0.0125	-0.0141	-0.0115	-0.0134	-0.0127
	(0.406)	(0.490)	(0.434)	(0.526)	(0.440)	(0.465)
Diversification	0.0357***	0.0312**	0.0349***	0.0302**	0.0403***	0.0404***
	(0.006)	(0.020)	(0.007)	(0.024)	(0.001)	(0.002)
Ln(MV)		0.0137		0.0141		0.0017
		(0.133)		(0.122)		(0.834)
Past Experience		0.0007		0.0007		0.0003
		(0.326)		(0.331)		(0.632)
Pre-deal Ownership		-0.0560		-0.0586		-0.0862*
		(0.253)		(0.232)		(0.071)
Constant	0.4510***	0.4212***	0.4326***	0.4001***	0.4675***	0.4669***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	3188	3188	3188	3188	3430	3430
R^2	0.063	0.065	0.064	0.066	0.057	0.058
adj. R^2	0.047	0.048	0.048	0.049	0.045	0.045

Table 3.7: OLS regressions of target announcement returns

This table presents results of OLS regressions of target announcement abnormal returns. In these models, this chapter regresses target CAR [-1, 1] against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. In-House dummy equals one if an acquirer does not retain any advisors for the deal. Other control variables include deal and firm characteristics. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. All continuous variables are winsorized at the 2% and 98% levels. This chapter also controls for acquirer and target industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Top-Tier	-0.0190**	-0.0186*				
	(0.022)	(0.081)				
No. of Top-Tier			-0.0206***	-0.0202**		
			(0.005)	(0.034)		
In-House					0.0200	0.0129
					(0.252)	(0.537)
No. of Advisors	-0.0227***	-0.0285***	-0.0137*	-0.0190*	-0.0231***	-0.0286***
	(0.001)	(0.003)	(0.085)	(0.082)	(0.001)	(0.002)
Relative Size	-0.0380***	-0.0406***	-0.0380***	-0.0405***	-0.0416***	-0.0462***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)
Cash	0.0022	-0.0011	0.0019	-0.0011	-0.0019	-0.0062
	(0.855)	(0.938)	(0.874)	(0.939)	(0.871)	(0.668)
Stock	-0.0376***	-0.0382***	-0.0381***	-0.0389***	-0.0366***	-0.0334***
	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)	(0.007)
Hostile	0.1319***	0.1387***	0.1324***	0.1402***	0.1317***	0.1335***
	(0.000)	(0.002)	(0.000)	(0.001)	(0.000)	(0.002)
Competing Bid	-0.0199	-0.0247	-0.0204	-0.0249	-0.0225	-0.0261
	(0.250)	(0.259)	(0.237)	(0.255)	(0.183)	(0.216)
Tender Offer	-0.0122	-0.0125	-0.0117	-0.0122	-0.0055	-0.0043
	(0.282)	(0.371)	(0.303)	(0.384)	(0.617)	(0.755)
Diversification	0.0314***	0.0322***	0.0308***	0.0317***	0.0334***	0.0330***
	(0.000)	(0.003)	(0.000)	(0.004)	(0.000)	(0.002)
Ln(MV)	0.0056**	0.0031	0.0061**	0.0035	0.0028	0.0006
	(0.043)	(0.391)	(0.027)	(0.315)	(0.268)	(0.854)
Past Experience	0.0002	0.0005	0.0002	0.0004	0.0000	0.0003
	(0.583)	(0.432)	(0.591)	(0.437)	(0.955)	(0.624)
Pre-deal Ownership	-0.0585*	-0.0996**	-0.0599*	-0.1024**	-0.0739**	-0.1110***
	(0.072)	(0.022)	(0.067)	(0.019)	(0.017)	(0.008)
M/B		0.0002		0.0002		-0.0005
		(0.857)		(0.876)		(0.685)
Leverage		-0.0056		-0.0059		-0.0060
		(0.792)		(0.781)		(0.768)
Cash Flows/Equity		0.0035		0.0054		0.0170
		(0.956)		(0.933)		(0.788)
RUNUP		-0.0074		-0.0072		-0.0049
		(0.606)		(0.613)		(0.725)
Constant	0.2037***	0.3130***	0.1922***	0.3004***	0.2250***	0.3309***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	2862	1917	2862	1917	3081	2074
R^2	0.122	0.119	0.123	0.120	0.114	0.106
adj. R^2	0.104	0.091	0.105	0.092	0.101	0.085

Table 3.8: Tobit regressions of acquirer total advisory fees

This table presents results of Tobit regressions of acquirer total advisor fees. Acquirer total advisory fees, obtained from Thomson One Banker, is the total advisory fees paid by an acquirer to all the financial advisors retained. In these models, this chapter regresses acquirer total advisory fees against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. Other control variables include deal and firm characteristics. Ln(TV) is the natural logarithm of the transaction value. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. All continuous variables are winsorized at the 2% and 98% levels. This chapter also controls for acquirer and target industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)	(2)	(3)	(4)
Top-Tier	0.9749***	0.9083***		
	(0.001)	(0.002)		
No. of Top-Tier			1.4074***	1.3803***
			(0.001)	(0.001)
No. of Advisors	4.2675***	4.2302***	3.8422***	3.7909***
	(0.000)	(0.000)	(0.000)	(0.000)
Ln(TV)	2.3322***	2.2774***	2.2472***	2.2525***
	(0.000)	(0.000)	(0.000)	(0.000)
Relative Size	1.0323**	1.1225**	1.1281***	1.1018**
	(0.012)	(0.045)	(0.006)	(0.048)
Cash	0.4149	0.5533	0.3597	0.5195
	(0.458)	(0.301)	(0.515)	(0.328)
Stock	0.4212	0.4087	0.4374	0.4183
	(0.330)	(0.343)	(0.309)	(0.329)
Hostile	2.2714*	2.5042*	2.2538*	2.4783*
	(0.091)	(0.063)	(0.086)	(0.061)
Competing Bid	0.7897	0.9078	0.8561	0.9722
	(0.421)	(0.345)	(0.376)	(0.307)
Tender Offer	0.2201	0.1889	0.2597	0.2380
	(0.682)	(0.718)	(0.626)	(0.646)
Diversification	0.1814	0.2554	0.1918	0.2754
	(0.608)	(0.469)	(0.585)	(0.431)
Ln(MV)		0.2407		0.1740
		(0.302)		(0.444)
Past Experience		-0.0862***		-0.0853***
		(0.000)		(0.000)
Pre-deal Ownership		-0.7450		-0.7112
		(0.547)		(0.567)
Constant	-15.0966***	-15.8338***	-14.4201***	-15.0118***
	(0.000)	(0.000)	(0.000)	(0.000)
N	1450	1450	1450	1450
pseudo R^2	0.160	0.163	0.162	0.164

Table 3.9: Negative binomial regressions of time-to-completion

This table presents results of negative binomial regressions of time-to-completion. Time-to-completion is measured as the number of days between announcement and effective date. In these models, this chapter regresses acquirer total advisory fees against a vector of explanatory variables. The key explanatory variables are the TopTier dummy and the term No. of TopTier. TopTier dummy equals one if an acquirer retains at least one top-tier advisor for the deal. No. of TopTier equals the number of top-tier advisors retained by the acquirer. Furthermore, No. of Advisors equals the number of advisors retained by the acquirer. Other control variables include deal and firm characteristics. Ln(TV) is the natural logarithm of the transaction value. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Pre-deal ownership is the percentage of target stocks owned by the acquirer prior to the announcement. All continuous variables are winsorized at the 2% and 98% levels. This chapter also controls for acquirer and target industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Top-Tier	0.0025	-0.0137				
	(0.939)	(0.653)				
No. of Top-Tier			0.0025	-0.0071		
			(0.929)	(0.785)		
In-House					0.1671***	0.1582***
					(0.000)	(0.002)
No. of Advisors	0.0624***	0.0557**	0.0613**	0.0581**	0.0647***	0.0559**
	(0.004)	(0.011)	(0.012)	(0.016)	(0.004)	(0.013)
Ln(TV)	0.0158	0.0071	0.0158	0.0068	0.0150*	0.0066
	(0.154)	(0.791)	(0.147)	(0.800)	(0.080)	(0.782)
Relative Size	0.0943***	0.1425***	0.0943***	0.1424***	0.0997***	0.1473***
	(0.000)	(0.005)	(0.000)	(0.006)	(0.000)	(0.002)
Cash	-0.2760***	-0.2977***	-0.2760***	-0.2983***	-0.2573***	-0.2812***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Stock	-0.0527**	-0.0575**	-0.0527**	-0.0574**	-0.0584**	-0.0627**
	(0.042)	(0.024)	(0.042)	(0.024)	(0.019)	(0.010)
Hostile	0.6491***	0.6073***	0.6490***	0.6075***	0.6335***	0.5894***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Competing Bid	0.2338***	0.2391***	0.2339***	0.2389***	0.2292***	0.2326***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)
Tender Offer	-0.4879***	-0.4908***	-0.4879***	-0.4906***	-0.5008***	-0.5009***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Diversification	-0.0162	-0.0328	-0.0162	-0.0327	-0.0154	-0.0320
	(0.485)	(0.174)	(0.484)	(0.173)	(0.490)	(0.168)
Ln(MV)		0.0190		0.0185		0.0167
		(0.365)		(0.379)		(0.389)
Past Experience		-0.0013		-0.0013		-0.0012
		(0.320)		(0.323)		(0.297)
Pre-deal Ownership		0.5747***		0.5727***		0.5963***
		(0.000)		(0.000)		(0.000)
Constant	4.7058***	4.6383***	4.7070***	4.6369***	4.7268***	4.6670***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	3188	3188	3188	3188	3430	3430

Table 3.10: Abnormal bid premium, abnormal acquirer total advisory fees and acquirer cost reduction for deals advised by top-tier and non-top-tier advisors

This table presents abnormal bid premium, abnormal acquirer total advisory fees and acquirer cost reduction for deals advised by top-tier and non-top-tier advisors, and the univariate comparison between deals advised by top-tier and non-top-tier advisors. Panel A, B and C report abnormal bid premium, abnormal acquirer total advisor fees and acquirer cost reductions, respectively. Abnormal bid premium is calculated as: $Abnomal\ \ Bid\ \ Premium_{it} = Bid\ \ Premium_{it} - Bid\ \ Premium_{pt}$, where Bid Premium$_{it}$ is the bid premium for acquirer *i* on date *t*; and Bid Premium$_{pt}$ is the mean bid premium for the reference portfolio *p* at year *t*. Abnormal total advisory fees is calculated as: $Abnormal\ \ Total\ \ Advisory\ \ Fees_{it} = Total\ \ Advisory\ \ Fees_{it} - Total\ \ Advisory\ \ Fees_{pt}$, where Total Advisory Fees$_{it}$ is the total advisory fees for acquirer *i* on date *t*; and Total advisory Fees$_{pt}$ is the mean acquirer total advisory fees for the reference portfolio *p* at year *t*. Cost Reduction is calculated as: $Cost\ \ Reduction_{it} = -Target\ \ Market\ \ Value_{it} \times Abnormal\ \ Bid\ \ Premium_{it} - Abnormal\ \ Advisory\ \ Fees_{it}$, where *Target Market Value*$_{it}$ is the market value for target *i* on date *t.* Reference portfolios are constructed in each year. TV refers to reference portfolio that is constructed based on transaction value quintile. RS refers to reference portfolio that is constructed based on relative size quintile. A_MV refers to reference portfolio that is constructed based on acquirer market value quintile. A_Ind refers to reference portfolio that is constructed based on acquirer industry. T_Ind refers to reference portfolio that is constructed based on target industry. P-Values are shown in parentheses (the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	Top-Tier (T)			Non-Top-Tier (N)			Difference (T – N)	
	Mean	**Median**	**N**	**Mean**	**Median**	**N**	**Mean**	**Median**
Panel A: Abnormal Bid Premium								
TV	-1.63%*	-8.02%***	1717	-1.03%	-9.23%***	1471	-0.60%	1.22%
	(0.100)	(0.000)		(0.398)	(0.000)		(0.704)	(0.361)
RS	-3.72%***	-10.76%***	1717	0.28%	-7.78%***	1471	-4.01%**	-2.97%*
	(0.000)	(0.000)		(0.815)	(0.000)		(0.011)	(0.058)
A_MV	-2.51%**	-8.76%***	1717	0.22%	-7.62%***	1471	-2.73%*	-1.14%
	(0.012)	(0.000)		(0.855)	(0.000)		(0.083)	(0.409)
A_Ind	-3.61%***	-8.12%***	1717	1.21%	-5.01%***	1471	-4.82%***	-3.11%***
	(0.000)	(0.000)		(0.313)	(0.000)		(0.002)	(0.006)
T_Ind	-4.02%***	-8.21%***	1717	1.67%	-4.69%***	1471	-5.69%***	-3.52%***
	(0.000)	(0.000)		(0.163)	(0.002)		(0.000)	(0.000)
Panel B: Abnormal Total Advisory Fees ($ mil.)								
TV	0.90***	0.11	574	-0.24**	-0.10***	634	1.13***	0.21***
	(0.000)	(0.162)		(0.026)	(0.000)		(0.000)	(0.004)
RS	2.86***	0.53***	574	-1.78***	-1.60***	634	4.64***	2.13***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
A_MV	1.72***	0.61***	574	0.02	-0.17***	634	1.70***	0.78***
	(0.000)	(0.000)		(0.833)	(0.000)		(0.000)	(0.000)
A_Ind	2.49***	0.49***	574	-1.02***	-0.94***	634	3.51***	1.42***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
T_Ind	2.47***	0.57***	574	-1.01***	-0.97***	634	3.48***	1.54***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
Panel C: Cost Reduction ($ mil.)								
TV	173.88***	33.37***	574	51.15***	5.70***	634	122.74***	27.67***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.006)	(0.000)
RS	262.85***	44.87***	574	63.62***	8.71***	634	199.23***	36.16***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
A_MV	216.27***	34.76***	574	48.33***	5.42***	634	167.94***	29.34***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
A_Ind	199.88***	24.28***	574	41.05***	6.03***	634	158.83***	18.25***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.001)
T_Ind	225.69***	28.24***	574	44.20***	5.39***	634	181.48***	22.85***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)

Table 3.11: Abnormal bid premium, abnormal acquirer total advisory fees and acquirer cost reduction for deals advised by multiple top-tier advisors and single top-tier advisor

This table presents results of abnormal bid premium, abnormal acquirer total advisory fees and acquirer cost reduction for deals advised by multiple top-tier advisors and single top-tier advisor, and the univariate comparison between deals advised by multiple top-tier advisors and single top-tier advisor. Panel A, B and C report abnormal bid premium, abnormal acquirer total advisor fees and acquirer cost reductions, respectively. Abnormal bid premium is calculated as: $Abnomal\ \ Bid\ \ Premium_{it} = Bid\ \ Premium_{it} - Bid\ \ Premium_{pt}$, where Bid Premium$_{it}$ is the bid premium for acquirer i on date t; and Bid Premium$_{pt}$ is the mean bid premium for the reference portfolio p at year t. Abnormal total advisory fees is calculated as: $Abnormal\ \ Total\ \ Advisory\ \ Fees_{it} = Total\ \ Advisory\ \ Fees_{it} - Total\ \ Advisory\ \ Fees_{pt}$, where Total Advisory Fees$_{it}$ is the total advisory fees for acquirer i on date t; and Total advisory Fees$_{pt}$ is the mean acquirer total advisory fees for the reference portfolio p at year t. Cost Reduction is calculated as: $Cost\ \ Reduction_{it} = -Target\ \ Market\ \ Value_{it} \times Abnormal\ \ Bid\ \ Premium_{it} - Abnormal\ \ Advisory\ \ Fees_{it}$, where *Target Market Value*$_{it}$ is the market value for target *i* on date *t.* Reference portfolios are constructed in each year. TV refers to reference portfolio that is constructed based on transaction value quintile. RS refers to reference portfolio that is constructed based on relative size quintile. A_MV refers to reference portfolio that is constructed based on acquirer market value quintile. A_Ind refers to reference portfolio that is constructed based on acquirer industry. T_Ind refers to reference portfolio that is constructed based on target industry. P-Values are shown in parentheses (the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	Multiple Top-Tier (MT)			Single Top-Tier (ST)			Difference (MT – ST)	
	Mean	**Median**	**N**	**Mean**	**Median**	**N**	**Mean**	**Median**
Panel A: Abnormal Bid Premium								
TV	-8.38%***	-10.74%***	189	-0.79%	-7.69%***	1528	-7.59%***	-3.05%
	(0.000)	(0.000)		(0.465)	(0.000)		(0.001)	(0.175)
RS	-13.04%***	-14.82%***	189	-2.57%**	-9.60%***	1528	-10.47%***	-5.23%***
	(0.000)	(0.000)		(0.018)	(0.000)		(0.000)	(0.008)
A_MV	-13.13%***	-14.48%***	189	-1.19%	-7.80%***	1528	-11.94%***	-6.68%***
	(0.000)	(0.000)		(0.271)	(0.000)		(0.000)	(0.001)
A_Ind	-12.20%***	-11.91%***	189	-2.55%**	-7.10%***	1528	-9.65%***	-4.81%**
	(0.000)	(0.000)		(0.017)	(0.000)		(0.000)	(0.017)
T_Ind	-14.56%***	-16.74%***	189	-2.72%***	-7.32%***	1528	-11.84%***	-9.42%***
	(0.000)	(0.000)		(0.010)	(0.000)		(0.000)	(0.000)
Panel B: Abnormal Total Advisory Fees ($ mil.)								
TV	4.82***	4.70***	69	0.36	0.00	505	4.46***	4.70***
	(0.000)	(0.000)		(0.125)	(0.719)		(0.000)	(0.000)
RS	9.70***	9.33***	69	1.93***	0.28***	505	7.77***	9.05***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
A_MV	5.18***	3.95***	69	1.25***	0.49***	505	3.94***	3.46***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
A_Ind	7.40***	6.21***	69	1.82***	0.27***	505	5.58***	5.95***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
T_Ind	6.79***	5.34***	69	1.88***	0.41***	505	4.91***	4.93***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
Cost Reduction ($ mil.)								
TV	500.97**	195.45***	69	129.19***	29.04***	505	371.78*	166.41**
	(0.011)	(0.003)		(0.002)	(0.000)		(0.063)	(0.011)
RS	754.80***	383.98***	69	195.63***	35.81***	505	559.17***	348.17***
	(0.000)	(0.000)		(0.000)	(0.000)		(0.008)	(0.000)
A_MV	705.16***	405.30***	69	149.47***	26.82***	505	555.69**	378.48***
	(0.003)	(0.000)		(0.000)	(0.000)		(0.017)	(0.001)
A_Ind	650.10***	222.32***	69	138.37***	16.93***	505	511.73**	205.39***
	(0.001)	(0.001)		(0.001)	(0.000)		(0.012)	(0.006)
T_Ind	724.99***	291.86***	69	157.46***	21.02***	505	567.52***	270.84***
	(0.001)	(0.000)		(0.000)	(0.000)		(0.006)	(0.000)

Appendix 3.1: Top 25 U.S. financial advisor ranking based on transaction value

The table presents the ranking of the top-25 financial advisors based on the transaction value for acquisitions of U.S. targets over the period January 1990 to December 31, 2012 obtained from the Thomson One Banker. Panel A and Panel B present the financial advisor ranking in the two periods – 1990s and 2000-2012, respectively. Transaction value is shown in U.S. million dollars.

Rank	Financial Advisor	Transaction Value	Number of Deals
	Panel A: 1990 – 1999		
	Top-Tier		
1	Goldman Sachs & Co	2,108,483.06	1,601
2	Bank of America Merrill Lynch	1,756,874.86	2,153
3	Morgan Stanley	1,669,074.77	1,338
4	JP Morgan	1,366,348.57	1,691
5	Credit Suisse	1,342,830.48	2,010
6	Citi (Salomon Brother/Salomon Smith Barney)	1,192,974.73	1,676
7	Barclays Capital (Lehman Brothers)	698,713.29	874
8	Lazard	613,378.80	568
9	UBS	435,536.00	1,018
10	Deutsche Bank	369,381.67	969
	Non-Top-Tier		
11	Sagent Advisors Inc	240,950.63	183
12	Commerzbank AG	233,242.03	326
13	Allen & Co Inc	121,159.69	50
14	Houlihan Lokey	111,308.94	390
15	Gleacher & Co Inc	92,671.86	78
16	Blackstone Group LP	69,979.81	142
17	RBC Capital Markets	65,626.50	495
18	Evercore Partners	63,025.41	11
19	Societe Generale	59,085.45	103
20	Greenhill & Co, LLC	59,037.24	30
21	Rothschild	57,591.51	88
22	RBS	49,244.64	341
23	Keefe Bruyette & Woods Inc	43,877.64	233
24	CIBC World Markets Inc	43,771.35	205
25	Jefferies & Co Inc	42,621.50	544
	Panel B: 2000 – 2012		
	Top-Tier		
1	Goldman Sachs & Co	4,973,479.30	2,114
2	Morgan Stanley	3,792,996.37	1,645
3	JP Morgan	3,706,846.89	2,150
4	Bank of America Merrill Lynch	3,505,114.78	2,300
5	Citi (Salomon Smith Barney)	2,968,442.45	1,727
6	Barclays Capital (Lehman Brothers)	2,501,839.85	1,339
7	Credit Suisse	2,479,914.42	1,968
8	UBS	1,413,062.93	1,129
9	Lazard	1,333,620.86	1,137
10	Deutsche Bank	1,240,930.78	832
	Non-Top-Tier		
11	Evercore Partners	1,003,975.81	330
12	Wells Fargo & Co	463,484.25	596
13	Houlihan Lokey	421,989.49	1,776
14	Blackstone Group LP	387,492.69	228
15	Commerzbank AG	356,890.59	139
16	Jefferies LLC	338,686.24	1,129
17	Rothschild	319,548.31	343
18	Greenhill & Co, LLC	319,022.93	177
19	Centerview Partners LLC	307,798.76	76

20	Stifel/KBW	295,882.18	1,125
21	Moelis & Co	217,178.07	252
22	BNP Paribas SA	215,787.84	55
23	Duff and Phelps	192,720.99	658
24	RBC Capital Markets	182,751.21	919
25	Perella Weinberg Partners LP	174,874.07	71

Appendix 3.2: Definitions of control variables

This table describes control variables in the regressions of this chapter. The definition for each variable are shown in the table. Panel A and B present firm characteristics and deal characteristics, respectively.

Variable	Definition
Panel A: Firm Characteristics	
Ln(MV)	The logarithm of the acquirer market value measured 4 weeks before the announcement (CRSP item PRC×SHROUT).
M/B	Market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT) divided by book value of equity at the fiscal year end before the announcement (Compustat item CEQ).
Leverage	Total debt over total capital at the fiscal year end before the announcement (Compustat item (DTLL+DLC)/(DLTT+DLC+SEQ)).
Cash Flows/Equity	Cash flows at the fiscal year end before the announcement (Compustat item IB+DP-DVP-DVC) divided by market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT).
RUNUP	Acquirer market-adjusted CARs before announcement date over the [-365, -28] window.
Past Experience	The number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question
Panel B: Deal Characteristics	
Ln(TV)	The logarithm of the transaction value (from Thomson One Banker).
Relative Size	Transaction value (from Thomson One Banker) divided by the acquirer market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT).
Pre-deal Ownership	The percentage of target stocks owned by the acquirer prior to the announcement.
Public	Dummy variable equals one if the target is a publicly listed firm.
Stock	Dummy variable equals one if the deal is 100% paid by stock.
Cash	Dummy variable equals one if the deal is 100% paid by cash.
Hostile	Dummy variable equals one if the deal attitude is identified as hostile or unsolicited by Thomson One Banker.
Competing Bid	Dummy variable equals one if there are more than one bidding firms reported by Thomson One Banker.
Tender Offer	Dummy variable equals one if the deal is identified as a tender offer by Thomson One Banker.
Diversification	Dummy variable equals one if the acquirer and the target have the different first two-digit of primary SIC code.

Chapter 4 : Financial Analyst Reputation and M&A Performance Predictive Ability

4.1. Introduction

This chapter investigates whether analyst recommendations are predictive of acquirer announcement performance, and more importantly explores how analyst reputation impacts recommendation predictive ability for acquirer performance.

Sell-side analyst behaviour around M&A and the role of analysts in M&As have been examined by literature. For example, Bradley, Morgan and Wolf (2007) analyse recommendations issued around tender offer announcements and suggest that analysts are not able to predict target firms and cannot identify deals that create value for acquirers in the long term. They find evidence of conflicts of interest that make affiliated analysts issue more favourable recommendations; however, the biased recommendations can be recognised by the stock market, and therefore have little influence on investors. Kolasinski and Kothari (2008) further examine analyst conflicts of interest in M&As and find that analysts, whether they are affiliated with acquirer or target investment banks, make biased recommendations to curry favour with their clients. In addition, Haushalter and Lowry (2011) find that acquirer investment banks reduce shareholdings of acquirers after their analysts downgrade the stock recommendations, but do not respond to recommendation upgrade by affiliated analysts, suggesting that asset managers affiliated with acquirer banks make investment decisions rationally following unbiased recommendations. Sibilkov, Straska and Waller (2013) suggest that acquiring firms reward banks that provide analyst coverage with M&A advisory business and premium advisory fees, and affiliated analysts tend to initiate or continue coverage. Tehranian, Zhao and Zhu (2014)

argue that analysts, who cover target firms before acquisitions and remain to cover combined firms after acquisitions, have a strong ability to make accurate forecasts and are more optimistic about the prospects of combined firms. They find that combined firms that gain more coverage from remaining target firms achieve better post-deal performance in the long term. Becher, Cohn and Juergens (2014) suggest that post-announcement recommendations have significant effects on deal completion rates. Specifically, acquirers (targets) with favourable (unfavourable) recommendations are more likely to successfully complete deals.

The literature discussed above has examined how analysts behave around M&As, and how markets respond to analyst recommendations for merger participants. However, to the best of the author's knowledge, no paper has directly investigated whether analyst pre-deal recommendations can be used to predict acquirer announcement performance. Sell-side analysts who are sophisticated in processing information have stock-picking and market-timing abilities; they are, therefore, able to make profitable stock recommendations (Womack, 1996; Ivković and Jegadeesh, 2004; Mikhail, Walther and Willis, 2004). On one hand, if analyst recommendations correctly reflect stock valuation, optimistic and pessimistic recommendations suggest that the stock is undervalued and overvalued, respectively. Shleifer and Vishny (2003) suggest that market misvaluation drives M&As, and overvalued firms tend to become acquirers. However, overvalued acquirers are more likely to engender negative market reactions, underperforming around announcements (Dong *et al.*, 2006). As a result, acquirers with favourable pre-deal recommendations are expected to gain better announcement performance than acquirers with unfavourable recommendations. On the other hand, if analysts appropriately consider growth business opportunities of firms, they should issue more optimistic recommendations for well-managed firms that have good future prospects. Previous

studies (Lang, Stulz and Walkling, 1989; Servaes, 1991) also suggest that well-managed acquirers outperform poorly managed acquirers over announcements. Consequently, acquirers with optimistic recommendations outperform acquirers with pessimistic recommendations. Overall, whether analyst recommendations are used as the proxy of firm valuation or firm growth prospects, it is reasonable to predict that more favourable recommendations are associated with better acquirer performance. In other words, analyst recommendations prior to acquisitions should have predictive ability for acquirer announcement performance.

More importantly, different from the above-mentioned literature that concentrates more on analyst conflicts of interest, this chapter focuses on the reputation–quality mechanism. More specifically, this chapter examines whether recommendations of star analysts have stronger predictive ability for acquirer performance than those of non-star analysts, and how star and non-star analysts respond to M&As.[24] Since star status is a key determinant of analyst compensation and promotion (Stickel, 1992; Michaely and Womack, 1999; Hong and Kubik, 2003; Leone and Wu, 2007), star analysts are supposed to provide high quality service, such as profitable recommendations, accurate earnings forecast, in-depth written reports and so forth.

However, the existing literature shows mixed results of this reputation–quality mechanism. More specifically, a considerable number of studies suggest that star analysts outperform non-star analysts in terms of forecast accuracy and recommendation profitability. For

[24] In each year, both *Institutional Investor* and *The Wall Street Journal* issue their star analyst rankings ('All-American Research Team' for *Institutional Investor*, and 'Best on the Street' for *The Wall Street Journal*). However, compared to rankings of *The Wall Street Journal*, *Institutional Investor* star analyst rankings are more influential, since the rankings have the longer history and more fund managers involve in the selection process. Therefore, this chapter examines *Institutional Investor* rankings.

instance, Stickel (1992) finds that earnings forecast errors are smaller for star analysts than for non-star analysts, and star forecast revisions exert a stronger influence on stock price than non-star revisions do. Desai, Liang and Singh (2000) find that star analysts recommended stocks that have better long-term performance compared to size- and industry-adjusted matching portfolios, indicating star analysts' superior stock-picking ability. Leone and Wu (2007) suggest that star analysts make more accurate earnings and more profitable recommendations than non-star analysts, and their outperformance can persist in the long term after star selections. Loh and Stulz (2011) find that star analysts' changes in recommendations are more influential in driving stock price movements. Fang and Yasuda (2009) suggest that analyst reputation has a positive effect on earnings forecast accuracy, and star analysts' forecast quality holds in the presence of conflicts of interest, indicating that analyst reputation alleviates moral hazard. Fang and Yasuda (2014) further find that investors gain excess returns by following star recommendations, and the returns are even higher for investors who have advanced access to analyst information, indicating that star recommendations are informative.

Meanwhile, Gleason and Lee (2003) find that star status does not have significant effects on post-forecast revision price drift. More importantly, Emery and Li (2009) suggest that star analyst elections are similar to a popularity contest that emphasizes analyst recognition rather than performance. Specifically, analysts who have had the star title before, who work for large or famous brokers, who cover large-cap stocks, who cover more firms, and who make more optimistic recommendations tend to be voted as stars. In other words, these factors enhance analyst recognition and increase the probability of them becoming stars. However, analyst performance measures are relatively ignored in the star election process. In particular, after an election, star analysts do not provide a higher quality service than non-star analysts, and even underperform.

Therefore, if star analysts have superior skills and their behaviours are not driven by conflicts of interest, star recommendations should have stronger predictive ability for acquirer announcement performance. However, if star rankings are a popularity contest, star recommendations will not be a more effective predictor of acquirer performance.

Motivated by the aforementioned unaddressed issues, this chapter investigates the predictive ability of analyst recommendations for acquirer announcement performance, through analysing a sample of 10169 US M&A deals made by acquirers with stock recommendations during 1996–2010. In this study, star analysts refer to analysts elected as members of the All-America Research Team (including first, second, third, and runner-up teams) by *Institutional Investor* magazine. Acquirer announcement performance is measured by five-day market-adjusted cumulative abnormal returns (CAR [-2, 2]) and standardized cumulative abnormal returns (SCAR [-2, 2]). Analysts' consensus recommendations for acquirers are measured by analysts' average recommendations over the pre-deal [-182, -7] window, and post-deal [7, 182] window.

As a consequence, this chapter finds that acquirers with more favourable consensus recommendations prior to takeover deals earn higher announcement returns, indicating that acquirer performance can be predicted by analyst recommendations. However, analyst reputation does not enhance recommendation informativeness. Specifically, there is no significant relation between star pre-deal consensus recommendations and acquirer announcement performance. In contrast, more optimistic non-star consensus recommendations, better acquirer performance. These results suggest that recommendations issued by star analysts are not as predictive as non-star recommendations. After takeover announcements, both star and non-star analysts provide more favourable recommendations for acquirers that gain higher returns around

announcement. In other words, both star and non-star analysts respond to acquisitions, adjusting stock recommendations based on takeover performance. Since the decisions on stock coverage may influence decisions on stock recommendations, in other words, the sample of acquirers with analyst recommendations are not randomly selected, and the results may suffer from selection bias. Therefore, this chapter uses the Heckman selection model to address this issue. The results are not qualitatively changed, confirming that non-star recommendations have stronger predictive ability for acquirer performance than star recommendations. In other words, this conclusion is consistent with the notion that star analyst rankings are a popularity contest (Emery and Li, 2009)

This study contributes to the existing literature in the following aspects. First, this chapter links analyst recommendations with acquirer performance. Different from papers that investigate whether analysts forecast M&As, this chapter explores whether investors can use analyst recommendations to predict acquirer performance. The existing literature suggests that recommendation change can drive stock price movement, whereas recommendations do not have such an effect (Womack, 1996; Loh and Stulz, 2011). Therefore, by examining stock recommendations rather than change in recommendations, this chapter distinguishes acquirer announcement effects from analyst revision effects. Although Bradley, Morgan and Wolf (2007) suggest that analysts do not recognize targets, this chapter finds that analyst pre-deal recommendations are an effective predictor of acquirer announcement performance, whether analysts forecast acquisitions or not.

Second, this chapter adds new evidence on the analyst reputation-quality mechanism in the context of M&As. Given the nature of the popularity contest, this chapter finds star recommendations to not be predictive for acquirer performance, whereas non-star

recommendations have strong predictive ability for acquirer performance. In other words, star analysts underperform.

Third, this chapter also has important implications for practitioners. The existing literature suggests that star analysts revisions are more influential to drive stock price drift (Stickel, 1992; Loh and Stulz, 2011). However, to predict acquirer announcement performance, investors would be better to follow non-star analysts' recommendations.

The reminder of this chapter is organised as follows. Section 2 conducts literature review. Section 3 develops the hypotheses. Section 4 introduces data selection process and methodology. Section 5 shows empirical results and discussion. Section 6 draws the conclusion.

4.2. Literature Review

This chapter reviews two schools of literature – the relations between analyst reputation and analyst performance, and the role of analysts in M&As.

4.2.1. Analysts and M&As

The relations between financial analysts and takeovers have been attracting increasing academic attention. For instance, through analysing analyst behaviour around announcements of tender offers, Bradley, Morgan and Wolf (2007) investigate whether investment bank affiliation results in biased stock recommendations, whether investors can de-bias the over-optimistic recommendations issued by affiliated analysts, and whether bank affiliation has negative effects on recommendation profitability in the long term. They find that recommendations of affiliated analysts tend to be biased towards

favourable recommendations over the internet bubble period from 1990–2000, implying analyst conflicts of interest, even though affiliated analysts do not make more optimistic recommendations than unaffiliated analysts over the full-sample period. If analysts are able to identify takeover targets, recommendations for targets should be more positive around announcements, since targets gain positive announcement abnormal returns. However, the empirical results show that recommendations for target firms over the period a quarter prior to the announcements are least optimistic during the pre-deal quarter [-4, 0] window, suggesting that analysts are not able to identify targets. In addition, market reactions to analyst recommendations for acquirers are negatively related to investment bank affiliation over the internet bubble period, which indicate that investors are able to recognize analyst conflicts of interest and de-bias the affiliated recommendations. Furthermore, acquirers with optimistic recommendations underperform acquirers with pessimistic recommendations in the long term, suggesting that analysts cannot identify value-enhancing deals. Finally, the difference in long-term profitability between affiliated and unaffiliated recommendations is insignificant, suggesting that the cost of analyst conflicts of interest is limited to investors in the long term.

Additionally, to distinguish analyst conflicts of interest from selection bias that ensures that investment banks with analysts who make favourable recommendations are chosen as M&A advisors, Kolasinski and Kothari (2008) examine the behaviour of acquirer-affiliated analysts in all-cash deals and target-affiliated analysts in all-stock deals. They find that acquirer-affiliated analysts make more favourable stock recommendations for acquirers surrounding announcements, and target-affiliated analysts upgrade stock recommendations for acquirers after the announcement date when the stock exchange rate is fixed. In other words, whether analysts are affiliated with acquirer or target investment

banks, they issue biased recommendations to curry favour with their clients, indicating the analyst conflicts of interest.

By analysing behaviour of investment banking divisions, sell-side analysts, and asset managers of acquirer banks, Haushalter and Lowry (2011) explore the relations between investment bank affiliation, conflicts of interest, and information flow between different divisions. They find that acquirer banks adjust the shareholdings of the acquirers after the analysts of these banks adjust their recommendations for the acquirers during the post-merger period. However, this pattern of investment bank behaviour does not exist prior to announcements. More importantly, acquirer banks reduce acquirers' shareholdings if their analysts downgrade the recommendations. In contrast, acquirer banks' asset managers do not significantly respond to analyst upgrade recommendations. For banks that rely more on investment banking business, there are no significant relations between changes in analyst recommendations and asset managers' decisions. These results suggest that asset managers make investment decisions based on recommendations that are less likely to be driven by conflicts of interest for analysts.

Sibilkov, Straska and Waller (2013) investigate whether analyst coverage is rewarded by firms with M&A advisory business. Their study shows that investment banks that provide acquirers with analyst coverage prior to acquisitions tend to be retained by the acquirers as M&A financial advisors. After the deals, analysts affiliated with acquirer banks are more likely to continue covering the acquirers, compared to non-affiliated analysts. Additionally, affiliated analysts that did not provide coverage prior to acquisitions are more likely to begin to cover the acquirers after deals. For investment banks that did not provide analyst coverage before acquisitions, banks gain higher advisory fees if they initiate coverage

after acquisitions. In other words, acquirers use investment-banking business to compensate financial advisors for their analyst coverage.

Tehranian, Zhao and Zhu (2014) investigate whether information on analysts' decisions to cover merger participants add value to investors. In particular, the authors (Tehranian, Zhao and Zhu, 2014) focus on target analysts who continue to cover merged firms, and argue that these target analysts' coverage decisions should contain more information about the quality of the deals and the performance of merged firms compared to acquirer analysts, since target analysts are confronted with more complex situations that targets are delisted after mergers, and merged firms are more difficult to analyse. Tehranian, Zhao and Zhu (2014) find that earnings forecasts for merged firms made by target analysts maintaining coverage are more accurate than those made by acquirer analysts maintaining coverage, indicating that remaining target analysts are more skilful than remaining acquirer analysts. Compared to acquirer analysts, target analysts tend to retain coverage for merged firms, when acquirers gain better announcement performance and pay lower bid premiums. Consequently, target analysts maintaining coverage make more favourable recommendations and more optimistic long-term forecasts for merged firms. Additionally, the percentage of remaining target analysts is positively related to merged firms' post-deal long-term operating and stock performance, while there is no relation between the percentage of remaining acquirer analysts and merged firms' performance. These results suggest that the coverage decisions of target analysts have strong predictive power for the performance of merged firms.

Becher, Cohn and Juergens (2014) investigate whether post-announcement analyst recommendations impact M&A deal completion. They (Becher, Cohn and Juergens, 2014) find that deal completion rates are positively (negatively) related to the number of upgrade

(downgrade) recommendations for acquirers, and are negatively (positively) related to the number of upgrade (downgrade) recommendations for targets. In other words, acquirers with favourable recommendations are more likely to complete deals, whereas targets with unfavourable recommendations are more likely to complete deals. Further tests suggest that the target termination rate is positively (negatively) related to the number of downgrade (upgrade) recommendations for acquirers, whereas there is no significant relation between acquirer termination and analyst recommendations. In other words, targets tend to terminate deals, when recommendations for acquirers are unfavourable. In addition, analyst recommendations have significant effects on deal completion in stock deals, but have no effects on deal completion in all-cash deals. These results suggest that the relations between deal completion and analysts' recommendations are driven by targets' considerations of the valuations of acquirers and targets. After deal resolution, both acquirers and targets with favourable recommendations significantly underperform in the long term, compared to merger participants with unfavourable recommendations.

Different from the above research of analysts' effects on M&As, Wu and Zang (2009) focus on mergers of financial firms that are employers of sell-side financial analysts, and explore how bank mergers influence analysts' careers. They (Wu and Zang, 2009) find that target analysts, accurate analysts in terms of earnings forecast, and analysts who have direct competitors in the merger counter party, are more likely to experience higher turnover during bank mergers. In comparison, more experienced analysts and star analysts tend to gain the promotion to research executives over the post-merger period.

4.2.2. Analyst Reputation and Analyst Performance

In terms of the effects of analyst reputation on analyst performance, there are two competing hypotheses – 'superior skills' and 'popularity contests'. The superior skills

hypothesis suggests that star analysts have superior abilities to process information, pick stocks and choose right timings; they can therefore provide more accurate earnings forecasts and more valuable recommendations. In contrast, the popularity contest hypothesis suggests that star status is determined by recognition rather than performance, and star analysts do not outperform non-star analysts.

The superior skills hypothesis is supported by considerable empirical evidence. Specifically, Stickel (1990) developed a model to predict analyst earnings forecast, and find that *Institutional Investor* star analysts are less likely to exhibit herding behaviour when they make earnings forecasts, and star analysts' earnings forecasts are less likely to be predicted compared to non-star analysts. Stickel (1992) further investigates reputation, forecast performance, and influence of financial analysts. The study (Stickel, 1992) shows that the absolute forecast errors are smaller for star analysts than for non-star analysts. In other words, star analysts make more accurate earnings forecasts compared to non-star analysts. Additionally, the mean time span between forecasts is shorter for star analysts than for non-star analysts, suggesting star analysts update their earnings forecasts more frequently than non-star analysts. In terms of the effects of downward forecast revisions on stock price, the difference between star and non-star analysts is insignificant. However, the abnormal returns after star analysts' upward forecast revisions are larger than the abnormal returns after non-star analysts' upward forecast revisions, indicating that star analysts' earnings forecasts have greater influence on stock price. In other words, star analysts' earnings forecasts are more informative. Stickel (1995) expanded the research by analysing analysts' recommendations, and finds that the effects of analyst recommendations on stock price are positively related to analyst reputation. In other words, star analysts' recommendations are more influential.

Desai, Liang and Singh (2000) examine whether *Wall Street Journal* star analysts have superior stock-picking skills, and find that one- and two-year buy-and-hold returns are significantly higher for stocks recommended by star analysts than for size- and industry-adjusted matching stocks, suggesting that recommendations of star analysts have investment value. However, the difference in abnormal returns between stocks recommended by different ranks of star analysts is insignificant. In addition, stocks recommended by star analysts who cover only one industry offer significantly positive abnormal returns, while stocks recommended by star analysts who cover multiple industries offer insignificantly negative abnormal returns, suggesting that focused star analysts outperform diversified star analysts in terms of investment value of recommendations. Furthermore, stocks recommended by multiple star analysts do not outperform stocks recommended by a single star analyst. Although information asymmetry is lower for large-cap stocks than for small-cap stocks, large-cap stocks recommended by star analysts provide significantly positive abnormal returns, suggesting that star analysts' superior stock-picking ability is also present in large-cap stocks.

Leone and Wu (2007) analyse the relations between *Institutional Investor* analyst rankings and analyst performance, and find that star analysts outperform non-star analysts in terms of both earnings forecasts and stock-picking abilities, and star analysts' forecast accuracy and recommendation profitability persist in the long term after they were voted as stars. Furthermore, star analysts are more likely to make bolder earnings forecasts that significantly deviate from analyst consensus, whereas non-star analysts tend to follow stars' forecasts. Compared to non-star analysts, star analysts are more likely to experience job promotion and move from a small broker to a large broker.

Loh and Stulz (2011) study the factors that determine the effects of recommendation changes on stock prices. They find that changes in recommendations are influential in moving stock prices when analysts were able to make influential recommendations in the past, when analysts are ranked as stars by *Institutional Investor*, when the recommendations deviate from consensus, when the recommendations are issued around earnings forecast announcements by the same analysts, and when the recommendations are made by leader analysts; whereas forecast accuracy and analyst experience do not render recommendations influential. In particular, star status is the most influential analyst-specific factor that impacts stock price in terms of both magnitude and statistical significance.

Fang and Yasuda (2009) investigate whether the reputations of banks and analysts are effective to discipline sell-side research. Their research suggests that more prestigious banks and *Institutional Investor* star analysts offer more accurate and less biased earnings forecasts, compared to less prestigious banks and non-star analysts. However, the effects of reputation on the quality of earnings forecasts alter according to the extent of conflicts of interest. Specifically, conflicts of interest lower the quality of earnings forecasts provided by prestigious banks, while star analysts still make higher quality earnings forecasts in the presence of conflicts of interest. In other words, analyst reputation rather than bank reputation alleviates conflicts of interest. Fang and Yasuda (2014) further examine the effects of analyst reputation on stock recommendation values, and find that investors gain excess returns by following star analysts' stock recommendations, compared to investors who follow non-star recommendations. In other words, star analyst recommendations are more informative. These information advantages are more significant for institutional investors that tend to have advanced access to analyst recommendations. In addition, the empirical evidence suggests that the outperformance of

star analysts should be attributed to superior skills rather than good luck, market overreaction to star status, or access to private information.

In contrast, there are also some studies in line with popularity contest hypothesis. For example, Gleason and Lee (2003) explore how analysts' revision of their earnings forecasts affect post-revision stock price movement, and find that neither *Institutional Investor* nor *The Wall Street Journal* star status have effects on post-revision abnormal returns. However, the effects of earnings revision signal on post-revision returns are significantly lower for *Institutional Investor* stars, but significantly higher for *the Wall Street Journal* stars, compared to non-star analysts.

Emery and Li (2009) investigate the determinants of sell-side analyst rankings and examine the post-voting performance of star analysts. Analysts who have been elected as *Institutional Investor* or *The Wall Street Journal* star analysts in the past, who work for more famous brokers, who work for larger brokers, who work for brokers with IPO reputation, who cover larger firms, and who cover more firms are more likely to be voted as *Institutional Investor* stars. Similarly, past star status, analyst experience, and working for large brokers increase the probability of being voted as *The Wall Street Journal* stars. In other words, both analyst rankings are determined by factors that help analysts win personal recognition. Furthermore, both *Institutional Investor* and *The Wall Street Journal* reward analysts who issue a higher percentage of optimistic ('buy' and 'strong buy') recommendations. However, analyst performance, such as forecast accuracy and recommendation values, exerts little influence on the probability of becoming *Institutional Investor* stars. In contrast, *The Wall Street Journal* ranking emphasizes recommendation performance, but does not consider earnings forecast quality. About 70% of *Institutional Investor* stars and just under 20% of *The Wall Street Journal* stars can repeat, indicating

that it is relatively easier for *Institutional Investor* stars but relatively difficult for *The Wall Street Journal* stars to maintain their star title. Although *Institutional Investor* does not disclose eligibility requirements, *Institutional Investor* creates greater barriers for analysts to compete. Meanwhile, the eligibility requirements of *The Wall Street Journal* also impede a vast number of top-performing analysts from being voted as stars, which impair its declaration of rankings being solely determined by performance. During the post-election period, neither *Institutional Investor* stars nor *The Wall Street Journal* stars outperform non-stars, whether analyst performance is measure by recommendation values or forecast accuracy. In particular, *The Wall Street Journal* stars even underperform non-stars in terms of recommendation values.

4.3. Hypotheses

The above-mentioned studies have examined the behaviour of analysts around M&As. However, no paper has investigated whether analyst recommendations can be used to predict acquirer performance.

Mergers and acquisitions are driven by market misvaluation (Shleifer and Vishny, 2003). Overvalued acquirers lead to negative market reactions, and therefore underperform around takeover announcements (Dong et al., 2006). Logically, analysts should advise investors to buy a stock when its market value drops under its intrinsic value, and to sell a stock when its market value rises above its intrinsic value. In other words, analysts issue optimistic recommendations for undervalued stocks, and pessimistic recommendations for overvalued stocks, if they are not driven by conflicts of interest. Therefore, if analysts judge stock value rationally, their stock recommendations announced prior to the acquisitions should have predictive ability for acquirer performance. In addition,

well-managed acquirers with growth prospects outperform poorly managed acquirers (Lang, Stulz and Walkling, 1989; Servaes, 1991). If information about managerial performance and business opportunities has been incorporated into stock recommendations, acquirer announcement performance should be predicable by analysing pre-deal recommendations. Based on the above reasons, this chapter expects that acquirers with more optimistic recommendations gain higher announcement abnormal returns.

More importantly, unlike the literature that concentrates on conflicts of interest, this chapter focuses on the reputation-quality mechanism. Specifically, this chapter investigates whether analyst reputation is positively related to recommendation predictive ability for acquirer performance. However, the literature reviewed above shows inconclusive evidence on the informativeness of star recommendations and forecasts. If star analysts have superior skills (Stickel, 1995; Desai, Liang and Singh, 2000; Leone and Wu, 2007; Fang and Yasuda, 2014) and reputation capital helps to discipline conflicts of interest (Fang and Yasuda, 2009), star recommendations should be a better predictor for acquirer performance. Therefore, this chapter constructs the following hypothesis:

H1: Star consensus recommendations have stronger predictive ability for acquirer performance than non-star consensus recommendations.

On the other hand, if analyst rankings are only a popularity contest (Emery and Li, 2009), star analysts will not make more informative recommendations compared to non-star analysts. In addition, star analysts tend to work for prestigious and large investment banks, and cover large-cap stocks (Emery and Li, 2009). Furthermore, star coverage can help banks gain more investment banking business (Clarke *et al.*, 2007). As a result, conflicts of interest are potentially more severe for star analysts than for non-star analysts. Therefore, this chapter also constructs the following alternative hypothesis:

H1a: Non-star consensus recommendations have stronger predictive ability for acquirer performance than star consensus recommendations.

4.4. Data and Methodology

4.4.1. Sample Selection

This chapter analyses a sample of US domestic M&As announced from 1st January 1996 to 31st December 2010[25] acquired from Thomson One Banker. Acquirers are required to be publicly listed firms, and targets are required to be public, private or subsidiary firms. The original sample includes 75275 deals. This chapter drops observations of acquisitions with transaction value less than $1 million, leaving 42084 deals. Bankruptcy acquisitions, going-private transactions, leveraged buyouts, liquidations, repurchases, restructurings, reverse takeovers, and privatizations are excluded from the sample, which leaves 28365 deals. To control for deal characteristics, observations are required report transaction value and payment method information to Thomson One Banker, which yields a sample of 20221 deals. In addition, this chapter obtains analyst stock recommendations data from the Institutional Brokers' Estimate System (IBES). Acquirers are required to have analyst recommendations over the period beginning 182 and ending 7 calendar days before the announcement [-182, -7], and beginning 7 and ending 182 calendar days after the announcement [7, 182]. To calculate announcement abnormal returns, acquirers are required to file sufficient stock price data with the CRSP database, which leaves a sample of 13605 deals. To measure firm characteristics, acquirers are required to have sufficient accounting data in the Compustat database, yielding a final sample of 10169 deals. In the

[25] Stock recommendation data in IBES database are available from October 1993. This chapter examines stock recommendations of acquirers one year around the acquisition announcement and use consensus recommendations over the period beginning 730 and ending 182 days before the announcement as the exclusion restriction in the Heckman selection model. Therefore, the sample of M&A deals of this chapter starts in 1st January 1996.

final sample, acquirers of 9179 deals have analyst stock recommendations over the pre-deal [-182, -7] window; acquirers of 9285 deals have post-deal analyst stock recommendations over the post-deal [7, 182] window.

4.4.2. Methodology

4.4.2.1. Measure of Consensus Recommendations

Analyst recommendations recorded in the IBES database are based on a five-point scale. Codes 1, 2, 3, 4 and 5 stand for 'strong buy', 'buy', 'hold', 'underperform', and 'sell', respectively. To map a more optimistic recommendation to a larger number, this chapter reverses the IBES codes, using 1, 2, 3, 4, and 5 to represent 'strong sell', 'sell', 'hold', 'buy', and 'strong buy', respectively. Analysts' consensus recommendations for acquirers are calculated as analysts' average recommendations. Correspondingly, consensus recommendations range from 1 to 5, where 1 and 5 represent the most pessimistic and the most optimistic consensus recommendations, respectively. This chapter calculates analysts' consensus recommendations over the pre-deal [-182, -7] window and post-deal [7, 182] window.[26] For the analyst who made several recommendations for a particular acquirer over the pre-deal or post-deal period, the analyst recommendation announced closest to the acquisition announcement is used to calculate consensus recommendations.

4.4.2.2. Measure of Analyst Reputation

This chapter uses a binary classification to distinguish between star and non-star analysts. Star analysts are defined as analysts voted as members of the All-America Research Team

[26] Since this chapter calculate acquirer abnormal returns over the [-1, 1], [-2, 2], and [-5, 5] event windows, consensus recommendations are measured during pre-deal [-182, -7] and [7, 182] windows to prevent overlap between acquisition event window and stock recommendation window.

(including first, second, third, and runner-up teams) by *Institutional Investor* magazine in the year prior to the announcement year.

Since analyst rankings are industry-specific, this chapter measures star status based on given industries. Following Boni and Womack (2006); Clarke *et al.* (2007); Emery and Li (2009), the Global Industry Classification Standard (GICS) developed by Standard & Poor's and MSCI is used in this chapter to identify industries. The GICS codes categorize companies into 10 sectors, 24 industry groups, 68 industries and 154 sub-industries[27]. The GICS codes for companies are extracted from the Compustat database. This chapter assigns each star analyst a GICS industry based on the analyst specialized industry recorded by *Institutional Investor* magazine.

4.4.2.3. Measure of Performance

This chapter uses two measures to estimate acquirer announcement performance – cumulative abnormal returns (CAR) and standardized cumulative abnormal returns (SCAR). Market-adjusted abnormal returns are defined as follows:

$$AR_{it} = R_{it} - R_{mt}$$

where R_{it} is the daily stock return for firm i on date t and R_{mt} is the daily return for the value-weighted CRSP index on date t. Subsequently, market-adjusted CARs are calculated over a [-2, 2] window around announcements (CAR [-2, 2]), as follows:

$$CAR_{i,T_1,T_2} = \sum_{t=T_1}^{T_2} AR_{it}$$

[27] Based on GICS structure and sub-industry definition effective June 30, 2010. Online at http://www.standardandpoors.com/indices/gics/en/au

In addition, SCARs over a [-2, 2] window around announcement (SCAR [-2, 2]) are calculated as follows:

$$SCAR_{i,T_1,T_2} = \frac{\sum_{t=T_1}^{T_2} AR_{it}}{\sigma(AR_{it})}$$

where $\sigma(AR_{it})$ is the standard deviation of daily market-adjusted abnormal returns over the period beginning 365 and ending 28 calendar days prior to the announcement [-365, -28].

4.4.2.4. Regression Analysis

This chapter examines whether star or non-star consensus recommendations have predictive ability for acquirer announcement performance, whether star or non-star analysts respond to M&As, and whether star or non-star consensus recommendations have predictive ability for deal completion.

4.4.2.4.1. Acquirer Announcement Performance

This chapter investigates whether consensus recommendations made by star or non-star analysts are effective predictors of acquirer announcement performance, via conducting the following OLS regressions:

$$CAR_i = \alpha_0 + \alpha_1 Consensus\_pre_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

$$SCAR_i = \alpha_0 + \alpha_1 Consensus\_pre_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

where CAR_i and $SCAR_i$, the dependent variables in the regressions, are used as the proxy of acquirer announcement performance, representing cumulative abnormal returns and standardized cumulative abnormal returns for acquirer *i* around the announcement, respectively. $Consensus\_pre_i$, the key explanatory variables in this research, represent the consensus recommendations for acquirers *i* over the pre-deal [-182, -7] window. In addition, this chapter includes a series of control variables that impact acquirer returns. Specifically, $Firm_i$ represents the firm characteristics of acquirer *i* at the end of the fiscal

year prior to the announcement. $Deal_i$ represents the deal characteristics for acquirer *i*. The explicit description of firm, and deal characteristics will be shown later in this section. This research also controls for year fixed effects (f_t) and industry fixed effects ($f_{ind.}$).

4.4.2.4.2. Analyst Post-Deal Consensus Recommendations

This chapter investigates whether star or non-star analysts' consensus recommendations announced over the post-deal period reflect acquirer announcement performance, through conducting the following OLS regressions:

$$Consensus\_post_i = \alpha_0 + \alpha_1 CAR_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

$$Consensus\_post_i = \alpha_0 + \alpha_1 SCAR_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

where *Consensus_post*, the dependent variable in this research, represent the consensus recommendations for acquirer *i* over the post-deal [7, 182] window. CAR_i and $SCAR_i$, the key independent variables in the regressions, represent cumulative abnormal returns and standardized cumulative abnormal returns for acquirer *i* around the announcement, respectively. Other control variables, such as $Firm_i$, $Deal_i$, f_t and $f_{ind.}$, have been explained above.

4.4.2.4.3. Deal Completion

This chapter investigates whether consensus recommendations made by star or non-star analysts are effective predictors of deal completion, via conducting the following Probit regression:

$$Prob(Competed\ \ Deal_i) = \alpha_0 + \alpha_1 Consensus\_pre_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \varepsilon_i$$

where *Completed Deal*$_i$ dummy, the dependent variables in the regressions, equals one if the deal is successfully completed by acquirer *i*. $Consensus_i$, the key explanatory variables

in this research, represent the consensus recommendations for acquirers *i* over the pre-deal [-182, -7] window. Other control variables, such as $Firm_i$, $Deal_i$, f_t and $f_{ind.}$, have been explained above.

4.4.2.4.4. Selection Bias

The aforementioned regressions only include observations of acquirers with analyst recommendations. If the analyst stock coverage and the stock recommendations are not independently decided, in other words, acquirers with recommendations are not randomly selected, then the above regression results will suffer from selection bias.

For the regressions of acquirer announcement performance and the regressions of post-deal consensus recommendations, this chapter uses the Heckman selection model (Heckman, 1976; 1978; 1979) to address the selection bias. The Heckman selection model (Heckman, 1976; 1978; 1979) includes two equations – the selection equation and the regression equation. Specifically, the selection equation addresses whether variables are observed and the mechanism of selectivity. The regression equation addresses the relations between observed variables – in other words, the mechanism of outcome. The Heckman selection models of acquirer announcement performance are shown as follows:

$$\begin{cases} Selection\ \ Equation \\ Coverage\_pre_i = \alpha_0 + \alpha_1 Firm_i + \alpha_2 Coverage\_past_i + f_t + f_{ind.} + \varepsilon_i \\ Regression\ \ Equation \\ CAR_i = \alpha_0 + \alpha_1 Consensus\_pre_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

$$\begin{cases} Selection\ \ Equation \\ Coverage\_pre_i = \alpha_0 + \alpha_1 Firm_i + \alpha_2 Coverage\_past_i + f_t + f_{ind.} + \varepsilon_i \\ Regression\ \ Equation \\ SCAR_i = \alpha_0 + \alpha_1 Consensus\_pre_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

where *Coverage_pre*$_i$ dummy equals one if acquirer i is covered by analyst recommendations over the pre-deal [-182, -7] window. *Coverage_past*$_i$ dummy[28] equals one if acquirer i is covered by analyst recommendations over the pre-deal [-730, -182] window. Other variables in the equations have been described above. Intuitively, the decision on stock coverage will not be affected by the details of a merger deal that has not made, unless analysts know the event will happen. Therefore, deal characteristics (*Deal*$_i$) are not included in the selection equations.[29]

In addition, the Heckman selection models of post-deal consensus recommendations are shown as follows:

$$\begin{cases} Selection\ \ Equation \\ Coverage\_post_i = \alpha_0 + \alpha_1 CAR_i + \alpha_2 Firm_i + \alpha_3 Deal_i + \alpha_4 Coverage\_past_i + f_t + f_{ind.} + \varepsilon_i \\ Regression\ \ Equation \\ Consensus\_post_i = \alpha_0 + \alpha_1 CAR_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

$$\begin{cases} Selection\ \ Equation \\ Coverage\_post_i = \alpha_0 + \alpha_1 SCAR_i + \alpha_2 Firm_i + \alpha_3 Deal_i + \alpha_4 Coverage\_past_i + f_t + f_{ind.} + \varepsilon_i \\ Regression\ \ Equation \\ Consensus\_post_i = \alpha_0 + \alpha_1 SCAR_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

where *Coverage_post*$_i$ dummy equals one if acquirer i is covered by analyst recommendations over the post-deal [7, 182] window. *Coverage_past*$_i$ dummy[30] equals one if acquirer i is covered by analyst recommendations over the pre-deal [-730, -7] window. Other variables in the equations have been described above.

---

[28] This variable is used to impose exclusion restrictions. In the Heckman selection model, it is advisable to include an exogenous variable in the selection equation, and exclude the variable from the regression equation. This variable should have influence on the selectivity, but do not have direct influence on the outcome.

[29] Results hold if deal characteristics are included in the selection equations.

[30] This variable is used to impose exclusion restrictions.

For the probit model of deal completion, this chapter uses the probit model with sample selection (Van de Ven and Van Praag, 1981) to address selection bias. Similarly, the probit model with sample selection (Van de Ven and Van Praag, 1981) also includes two equations – selection equation and probit equation. The probit model with sample selection of deal completion is shown as follows:

$$\begin{cases} Selection\ \ Equation \\ Coverage\_pre_i = \alpha_0 + \alpha_1 Firm_i + \alpha_2 Coverage\_past_i + f_t + f_{ind.} + \varepsilon_i \\ Regression\ \ Equation \\ Completed\ \ Deal_i = \alpha_0 + \alpha_1 Consensus\_pre_i + \alpha_2 Firm_i + \alpha_3 Deal_i + f_t + f_{ind.} + \epsilon_i \end{cases}$$

where *Coverage_pre*$_i$ dummy equals one if acquirer i is covered by analyst recommendations over the pre-deal [-182, -7] window. The *Coverage_past*$_i$ dummy[31] equals one if acquirer *i* is covered by analyst recommendations over the pre-deal [-730, -182] window. Other variables in the equations have been described above.

4.4.2.4.5. Control Variables: Firm and Deal characteristics

The control variables in this chapter include firm and deal characteristics.[32] For firm characteristics (*Firm*$_i$), this chapter controls for size (*Ln(MV)*), market-to-book ratio (*M/B*), leverage (*Leverage*), cash flow-to-equity ratio (*Cash flows/Equity*), pre-deal stock performance (*RUNUP*), stock risk (*Sigma*), and acquirer takeover experience (*Past Experienced*).

For deal characteristics (*Deal*$_i$), this chapter controls for deal size (*Ln(TV)*), relative transaction values (*Relative Size*), acquirer public status (*Public*), payment method

[31] This variable is used to impose exclusion restrictions.

[32] All the control variables mentioned in this section are described in Appendix 4.1, where Panels A and B present firm characteristics and deal characteristics, respectively.

(*Cash/Stock*), deal attitude (*Hostile*), bid competition (*Competing Bid*), tender offers (*Tender offer*), and diversifying deals (*Diversification*).

4.5. Results

4.5.1. Summary Statistics and Univariate Test

4.5.1.1. Summary Statistics for the Sample of M&A Deals

Table 4.1 exhibits summary statistics for the sample of M&A deals by acquirers covered by analyst recommendations around the announcement, and the univariate comparison between acquirers with star recommendations and without star recommendations. The sample includes 10169 deals. 3497 deals are made by acquirers with star recommendations, while 6672 deals are made by acquirers without star recommendations.

[Insert Table 4.1 here]

Panel A presents acquirer announcement performance. For the entire sample, acquirer CAR [-2, 2] is significantly positive, averaging 1.053% (p=0.000). The mean and median CAR [-2, 2] for acquirers covered by star analysts are 0.573% (p=0.000) and 0.142% (p=0.001), respectively; whereas the mean and median CAR [-2, 2] for acquirers covered by non-star analysts only are 1.305% (p=0.000) and 0.638% (p=0.000), respectively. Acquirers covered by star analysts underperform acquirers covered by non-star analysts only by 0.732% (p=0.000) on average. Furthermore, acquirer SCAR [-2, 2] average 32.086% (p=0.000). The mean and median SCAR for acquirers covered by star analysts are 17.366% and 6.641%, respectively; while the mean and median SCAR [-2, 2] for acquirers covered by non-star analysts are only 39.801% and 23.928%, respectively. Acquirers covered by star analysts gain significantly lower SCAR, compared to acquirers

covered by non-star analysts only. Overall, regardless of measure of acquirer returns, acquirers covered by star analysts significantly underperform acquirers covered by non-star analysts around the announcement.

Panel B shows firm characteristics of acquirers. For the entire sample, the acquirer market value averages $6646.352 million. The mean (median) market value for acquirers covered by star analysts is $14457.385 ($3176.558) million, while the mean (median) market value for acquirers covered by non-star analysts is only $2552.350 million ($436.26 million). The difference is statistically significant. The mean (median) size of acquirers covered by star analysts is 5.66 (7.28) times as large as the mean (median) size of acquirers covered by non-star analysts only. The mean and median market-to-book ratio for acquirers in the entire sample is 4.741 and 2.819, respectively. Acquirers covered by star analysts have significantly higher market-to-book ratio than other acquirers in the sample. The mean (median) leverage ratio for acquirers in the entire sample is 0.313 (0.285). Acquirers covered by star analysts have significantly higher leverage ratios than other acquirers in the sample. The mean (median) cash flows-to-equity ratio for acquirers in the entire sample is 0.044 (0.047). Acquirers covered by star analysts have a significantly higher cash flows-to equity ratio than other acquirers in the sample. The mean and median pre-deal stock price runups for acquirers in the entire sample are 18.367% and 11.204%, respectively. Acquirers covered by star analysts significantly underperform over the pre-deal [-365, -28] window, although the difference in median runup between acquirers covered by star analysts and non-star analysts only is insignificant. The mean (median) sigma for acquirers in the entire sample is 0.031 (0.026). Acquirers covered by star analysts have significantly lower sigma than other acquirers in the sample. For the entire sample, acquirers made 7.879 deals over the five-year period prior to acquisition on average. The median acquirer made five deals over the five-year period prior to

acquisition. Acquirers covered by star analysts are significantly more experienced than other acquirers in the sample.

Panel C shows the deal characteristics. The mean (median) transaction value for the entire sample is $272.979 million ($49.500 million). The mean and median transaction values for deals by acquirers covered by star analysts are $514.953 million and $130.000 million, respectively; while the mean and median transaction values for deals by acquirers covered by non-star analysts only are $146.154 million and $32.000 million, respectively. The difference is significant. The mean (median) transaction value for deals by acquirers covered by star analysts is 3.52 (4.06) times as large as the mean (median) transaction value for deals by other acquirers in the sample. The mean (median) relative size for deals by acquirers covered by star analysts is 0.167 (0.064). Deals by acquirers covered by star analysts have significantly lower relative size than other deals in the sample. 26.856% of deals in the entire sample are public acquisitions. Acquirers covered by star analysts make a significantly higher percentage of public acquisitions. All-stock deals, all-cash deals and mixed paid deals account for 23.493%, 41.892% and 34.615% of the sample, respectively. Acquirers covered by star analysts make a significantly higher percentage of all-cash deals, and a lower percentage of mixed paid deals than other acquirers in the sample. Hostile deals account for 1.160% of the sample. Acquirers covered by star analysts make a significantly higher percentage of hostile deals. 1.583% of deals in the entire sample are competing bids. Acquirers covered by star analysts involve a significantly higher percentage of competing bids. Tender offers account for 6.126% of deals in the entire sample. Acquirers covered by star analysts make a higher percentage of tender offers. Diversifying deals occupy 36.719% of the deals in the entire sample. The difference in making diversifying deals between acquirers covered by star analysts and other acquirers is insignificant. 91.769% of deals in the sample are successfully completed. The difference

in deal completion rate between acquirers covered by star analysts and other acquirers is insignificant.

Overall, Table 4.1 suggests that acquirers covered by star analysts gain significantly lower abnormal returns around the announcement, compared to acquirers covered by non-star analysts only. In addition, compared to only non-star covered acquirers, acquirers covered by star analysts tend to be larger firms, more glamour firms, firms with higher leverage, firms with a higher cash flows-to-equity ratio, firms with lower stock price runup, lower sigma firms, and more firms with more M&A experience. Moeller, Schlingemann and Stulz (2004) show that large firms tend to make value-destroying M&A deals. Rau and Vermaelen (1998), and Dong *et al.* (2006) suggest that glamour acquirers underperform value acquirers. Jensen (1986), Smith and Kim (1994), and Harford (1999) argue that cash-richness has negative effects on acquirer performance. Therefore, it is not difficult to understand why star-covered acquirers gain lower abnormal returns. Furthermore, acquirers covered by star analysts tend to make deals with larger transaction values but with lower relative size, a higher percentage of public acquisitions, a higher percentage of all-cash deals, a lower percentage of mixed paid deals, a higher percentage of hostile deals, a higher percentage of competing bids, and a higher percentage of tender offers.

4.5.1.2. Consensus Recommendations for Acquirers Around Announcements

Table 4.2 shows analyst consensus recommendations, star consensus recommendations and non-star consensus recommendations for acquirers surrounding M&A announcements.

[Insert Table 4.2 here]

Panel A presents consensus recommendations over the pre-deal [-182, -7] window. Specifically, consensus recommendations of all analysts average 3.923. Star and non-star consensus recommendations average 3.783 and 3.930, respectively. Although the difference in consensus recommendations between star and non-star analysts is statistically significant (p=0.000), both star and non-star pre-deal consensus recommendations are close to 4 ('buy') – in other words, optimistic.

Panel B presents consensus recommendations over the post-deal [7, 182] window. Specifically, consensus recommendations of all analysts average 3.860. Star and non-star consensus recommendations average 3.741 and 3.864, respectively. Both star and non-star post-deal consensus recommendations are optimistic, although the star consensus recommendations are significantly lower than non-star consensus recommendations.

Panel C presents the difference between post-deal and pre-deal consensus recommendations. Whether the consensus recommendations are made by star or non-star analysts, post-deal consensus recommendations are significantly lower than pre-deal consensus recommendations. However, the magnitude of the adjustment is relatively small.

Overall, both star and non-star consensus recommendations around announcement are optimistic. Furthermore, both star and non-star analysts lower the consensus recommendations after the announcement. However, the consensus recommendations are still optimistic.

4.5.1.3. Announcement Performance for Acquirers with Different Pre-Deal Consensus Recommendations

Table 4.3 shows announcement performance for acquirers with different consensus recommendations over the pre-deal [-182, -7] window. Acquirers are divided into groups based on consensus recommendations.

[Insert Table 4.3 here]

Panel A presents announcement performance for acquirers with pessimistic, neutral, and optimistic consensus recommendations. Consensus recommendations are defined as pessimistic, if $1 \leq Consensus < 2.5$. Consensus recommendations are defined as neutral, if $2.5 \leq Consensus < 3.5$. Consensus recommendations are defined as optimistic, if $3.5 \leq Consensus \leq 5$. Panel A1 relates to acquirers covered by analysts. Acquirers with pessimistic, neutral and optimistic consensus recommendations account for 1.296%, 22.366% and 76.337% of observations in the sample. In other words, the majority of analyst-covered acquirers have optimistic consensus recommendations prior to announcements. Mean and median CARs for acquirers with pessimistic analyst consensus recommendations are statistically insignificantly different from zero, whereas mean and median CARs for acquirers with optimistic consensus recommendations are 1.069% (p=0.000) and 0.508% (p=0.000), respectively. The differences in mean and median CARs between acquirers with pessimistic and optimistic consensus recommendations are statistically significant. In addition, mean and median SCARs for acquirers with pessimistic analyst consensus recommendations are statistically insignificantly different from zero, whereas mean and median SCARs for acquirers with optimistic consensus recommendations are 32.391% (p=0.000) and 20.385% (p=0.000), respectively. The differences in median SCARs between acquirers with pessimistic and optimistic

consensus recommendations are statistically significant. These results suggest that more optimistic pre-deal analyst consensus recommendations associate with better acquirer performance.

Panel A2 relates to acquirers covered by star analysts. Acquirers with pessimistic, neutral and optimistic consensus recommendations account for 3.673%, 31.633% and 64.694% of observations in the sample. In other words, the majority of star-covered acquirers have optimistic star consensus recommendations prior to announcements. Whether acquirer performance is measured by CAR or SCAR, the difference in announcement performance between acquirers with pessimistic and optimistic consensus recommendations is statistically insignificant. In other words, there are no relations between pre-deal star consensus recommendations and acquirer announcement performance.

Panel A3 relates to acquirers covered by non-star analysts. Acquirers with pessimistic, neutral and optimistic consensus recommendations account for 1.358%, 22.097% and 76.545% of observations in the sample. In other words, the majority of non-star covered acquirers have optimistic non-star consensus recommendations prior to announcements. Mean and median CARs for acquirers with pessimistic non-star consensus recommendations are statistically insignificantly different from zero, whereas mean and median CARs for acquirers with optimistic non-star consensus recommendations are 1.075% (p=0.000) and 0.509% (p=0.000), respectively. The median SCARs for acquirers with optimistic non-star consensus recommendations are significantly higher than that for acquirers with pessimistic non-star consensus recommendations. In addition, acquirers with pessimistic non-star consensus recommendations gain insignificant SCARs, whereas acquirers with optimistic consensus recommendations gain significantly positive SCARs (mean and median SCARs are 32.201% and 20.920%, respectively). The differences in

median SCARs between acquirers with pessimistic and optimistic consensus recommendations are statistically significant. These results suggest that more optimistic pre-deal non-star consensus recommendations there are, the better the acquirer announcement performance is.

Since the majority of consensus recommendations for acquirers are optimistic, this chapter conducts further testing on acquirers with optimistic consensus recommendations. Panel B shows announcement performance for acquirers with optimistic consensus recommendations. Optimistic consensus recommendations are further divided into two levels – less optimistic ($3.5 \leq Consensus < 4.5$) and more optimistic ($4.5 \leq Consensus \leq 5$). Panel B1 relates to acquirers covered by analysts. The mean and median CARs for acquirers with less optimistic analyst consensus recommendations are 0.759% (p=0.000) and 0.266% (p=0.000), respectively; while the mean and median CARs for acquirers with more optimistic consensus recommendations are 1.756% (p=0.000) and 1.134% (p=0.000), respectively. The differences in mean and median CARs are statistically significant. Furthermore, the mean and median SCARs for acquirers with less optimistic consensus recommendations are 23.133% (p=0.000) and 11.367% (p=0.000), respectively; whereas the mean and median SCARs for acquirers with more optimistic consensus recommendations are 52.987% (p=0.000) and 38.928% (p=0.000), respectively. The differences in mean and median SCARs are statistically significant. These results suggest that acquirers with more optimistic analyst recommendations gain significantly higher announcement abnormal returns compared to acquirers with less optimistic recommendations.

Panel B2 relates to acquirers covered by star analysts. Whether acquirer performance is measured by CAR or SCAR, the differences in announcement performance between

acquirers with less optimistic and more optimistic star consensus recommendations are statistically insignificant. In other words, acquirers with more optimistic star recommendations do not outperform acquirers with less optimistic star consensus recommendations. The results suggest that star consensus recommendations do not relate to acquirer announcement performance.

Panel B3 relates to acquirers covered by non-star analysts. The mean and median acquirers with less optimistic consensus recommendations gain CARs of 0.760% (p=0.000) and 0.266% (p=0.000), respectively. In contrast, the mean and median acquirers with more optimistic consensus recommendations gain CARs of 1.735% (p=0.000) and 1.071% (p=0.000), respectively. CARs for acquirers with more optimistic non-star consensus recommendations are significantly higher than those for acquirers with less optimistic non-star consensus recommendations. In addition, the mean and median acquirers with less optimistic consensus recommendations gain SCARs of 23.399% (p=0.000) and 11.640% (p=0.000), while the mean and median acquirers with more optimistic consensus recommendations gain SCARs of 50.624% (p=0.000) and 37.446% (p=0.000). SCARs are significantly higher for acquirers with more optimistic non-star consensus recommendations than for acquirers with less optimistic non-star consensus recommendations. These results suggest that acquirers with more optimistic non-star consensus recommendations gain better announcement performance.

Overall, the above results suggest that pre-deal non-star consensus is an effective predictor for acquirer performance, whereas star consensus recommendations have no effects on forecasting acquirer performance.

4.5.1.4. Post-Deal Recommendations for Acquirers with Different Announcement Performance

Table 4.4 shows consensus recommendations over the post-deal [7, 182] window for acquirers with different announcement performance.

[Insert Table 4.4 here]

Panel A presents post-deal consensus recommendations for acquirers with different CARs. Acquirers are categorized into quartiles based on announcement CARs. Consensus recommendations of all analysts, star consensus recommendations, and non-star consensus recommendations for acquirer quartile of highest CARs are 3.947, 3.874 and 3.946, respectively. Whether the recommendations are all made by analysts, star analysts or non-star analysts, acquirer quartiles of the highest CARs have the most optimistic consensus recommendations; and the differences in consensus recommendations between the acquirer quartiles of the highest CARs and the lowest CARs are statistically significant. These results suggest that post-deal consensus recommendations of all analysts, stars and non-stars are positively related to acquirer CARs.

Panel B presents post-deal consensus recommendations for acquirers with different SCARs. For analyst consensus recommendations and non-star consensus recommendations, acquirer quartiles of the lowest SCARs have the least optimistic consensus recommendations (3.821 for analyst consensus, and 3.825 for non-star consensus); acquirer quartiles of the highest SCARs have the most optimistic consensus recommendations (3.890 for analysts' consensus, and 3.892 for non-star consensus). The difference in consensus recommendations between the acquirer quartiles of the lowest SCARs and the highest SCARs are statistically significant. For star consensus

recommendations, acquirer quartile of the highest SCAR has the most optimistic consensus recommendations, although the difference in consensus recommendations between the acquirer quartiles of the lowest SCARs and the highest SCARs are statistically insignificant. However, apart from the acquirer quartile of the lowest SCARs, there is a trend that star consensus recommendations become increasingly optimistic with the increase in acquirer SCARs (star consensus 3.716, 3.733 and 3.780 for acquirer quartile of third highest, second highest, and the most highest SCARs). These results suggest that post-deal consensus recommendations of all analysts, stars and non-stars are positively related to acquirer SCARs.

In general, more optimistic post-deal consensus recommendations are associated with greater acquirer announcement abnormal returns. The results suggest that both star and non-star post-deal consensus recommendations respond to acquirer announcement performance.

4.5.2. Regression Analysis

This chapter conducts regressions to examine whether star and non-star consensus recommendations have predictive ability for acquirer performance, whether star and non-star analysts respond to M&As, and whether star and non-star consensus recommendations can be used to predict deal completion.

4.5.2.1. Acquirer Announcement Performance

Table 4.5 shows the results of the OLS regressions of the acquirer announcement performance for the sample of acquirers covered by analysts (specifications 1 and 4), the subsample of acquirers covered by star analysts (specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (specifications 3 and 6). Star analysts

are defined as analysts voted as the *Institutional Investor* all-star analysts in the year before the acquisition year. In these models, this chapter regresses acquirer performance (CAR [-2, 2] for specifications 1, 2, and 3; and SCAR [-2, 2] for specifications 4, 5, and 6 against a vector of explanatory variables. The key explanatory variable is *Consensus*, calculated as the average analyst recommendations (*Consensus* of all analyst in Specification 1 and 4; *Consensus* of star analysts in Specification 2 and 5; and *Consensus* of non-star analysts in Specification 3 and 6).

[Insert Table 4.5 here]

The key explanatory variable *Consensus* is significantly positive in specifications 1, 3, 4, and 6. In other words, regardless of the measure of acquirer performance used, pre-deal consensus recommendations of all analysts are significantly positively related to acquirer announcement performance, suggesting that acquirers with more optimistic pre-deal consensus recommendations gain higher announcement returns. In addition, consensus recommendations of stars are significantly positively related to acquirer performance, whereas consensus recommendations of non-stars do not relate to acquirer performance. These results suggest that non-star consensus recommendations are effective predictors for acquirer performance, while star consensus recommendations do not have predictive ability for acquirer performance.

Furthermore, the variable *Ln(MV)* is significantly negative in specifications 1, 3, 4, 5 and 6, which indicate that larger acquirers obtain better announcement performance. The variable *Cash Flows/Equity* is significantly positive in specifications 2 and 5, suggesting that acquirers with a higher cash flows-to-equity ratio gain higher announcement abnormal returns. In other words, acquirers with better pre-deal operating performance outperform

around announcement. The variable *RUNUP* is significantly positive in all of the specifications, which suggests that acquirers with better pre-deal stock performance gain higher announcement abnormal returns. The variable *Sigma* is significantly positive in specification 2, indicating that high sigma acquirers outperform low sigma acquirers. The variable *Relative Size* is significantly positive in specifications 1, 3, 4 and 6, suggesting that acquisitions of relatively larger targets create more value for acquirers. The *Public* dummy is significantly negative in all of the specifications, indicating that public acquisitions create less value for acquirers compared to private and subsidiary acquisitions. The *Cash* dummy is significantly positive in all of the specifications, which suggest that acquirers that make all-cash deals outperform acquirers that make all-stock deals or mixed paid deals. The *Hostile* dummy is significantly negative in all of the specifications, indicating that hostile deals decrease value. The *Competing Bid* dummy is significantly negative in all of the specifications, suggesting that acquisition contests have negative effects on acquirer performance. The *Tender Offer* dummy is significantly positive in all of the specifications, which indicate that acquirers that make tender offers gain higher abnormal returns. The *Diversification* dummy is significantly negative in specification 5, indicating that diversifying deals decrease value for acquirers.

Since analyst stock coverage and stock recommendations may be not independently decided, there should be concern about selection bias. This chapter employs the Heckman selection model to address the potential selection bias. Table 4.6 shows the results of the Heckman selection model of the acquirer announcement performance for the sample of acquirers covered by analysts (specifications 1 and 4), the subsample of acquirers covered by star analysts (specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (specification 3 and 6). In these models, the dependent variables of selection equation and regression equation are pre-deal [-182, -7] recommendation

coverage (analyst coverage for specifications 1 and 4; star coverage for specifications 2 and 5; non-star coverage for specifications 3 and 6) and acquirer performance (CAR [-2, 2] for specifications 1, 2, and 3; and SCAR [-2, 2] for specifications 4, 5, and 6), respectively.

[Insert Table 4.6 here]

According to specifications 1 and 4, the selection equations suggest that financial analysts tend to cover large firms, glamour firms, firms with high leverage ratio, firms with high cash flows-to-equity ratio, firms with low stock price runup, and high sigma firms. The *Inverse Mills* ratio is statistically significant in the regression equations, indicating that the above OLS regressions for the sample of acquirers covered by analysts suffer from selection bias. Furthermore, the significant positive coefficients on the *Inverse Mills* ratio imply that given observables and latent variables that increase the probability of analyst coverage are associated with higher acquirer announcement returns. Although the selection bias presents, the relations between pre-deal analyst consensus recommendations and acquirer announcement performance are robust. The regression equations still suggest that more favourable pre-deal analysts' consensus recommendations are associated with higher acquirer returns.

According to specifications 2 and 5, the selection equations suggest that star analysts are more likely to cover large firms, value firms, firms with high leverage ratio, firms with high cash flows-to-equity ratio, firms with low stock price run-up, high sigma firms, and firms with relatively less acquisition experience. The *Inverse Mills* ratio is statistically insignificant in the regression equations, proving the consistency of OLS estimators for the sample of acquirers covered by stars. The insignificant coefficients on the *Inverse*

Mills ratio indicate that the given observable and latent variables that increase the probability of star coverage are not related to acquirer performance.

According to specifications 3 and 6, the selection equations suggest that large firms, glamour firms, firms with high leverage ratio, firms with a high cash flows-to-equity ratio, firms with low stock price runup, and high sigma firms are more likely to be covered by non-stars. The *Inverse Mills* ratio is significantly positive in the regression equations, suggesting that selection bias presents in above OLS regressions for the sample of acquirers covered by non-stars, and indicating that the given observable and latent variables that increase the probability of non-star coverage relate to better acquirer performance. The regression equations imply that more favourable pre-deal non-start consensus recommendations for acquirers, higher acquirer abnormal returns.

Overall, acquirers with higher pre-deal non-star consensus recommendations obtain better performance around announcements. In contrast, acquirers with higher pre-deal star consensus recommendations do not outperform other acquirers. In other words, non-star consensus recommendations are effective predictors for acquirer performance, whereas star-consensus recommendations do not have predictive ability for acquirer performance.

4.5.2.2. Post-Deal Consensus Recommendations

Table 4.7 shows the results of OLS regressions of post-deal [7, 182] consensus recommendations on acquirer performance for the sample of acquirers covered by analysts (specifications 1 and 4), the subsample of acquirers covered by star analysts (specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (specifications 3 and 6). The key explanatory variables are CAR [-2, 2] (in specifications 1, 2, and 3) and SCAR [-2, 2] (in specifications 4, 5, and 6).

[Insert Table 4.7 here]

The coefficients on *CAR [-2, 2]* are significantly positive in specifications 1 and 3. The coefficients on *SCAR [-2, 2]* are significantly positive in specifications 4 and 6. These results suggest that post-deal analyst consensus recommendations are more favourable for acquirers with higher announcement returns. Additionally, non-stars make more favourable post-deal consensus recommendations for better-performing acquirers. The coefficient on the *CAR [-2, 2]* and *SCAR [-2, 2]* lose the significance in the specifications 2 and 5, respectively. However, these results suffer from selection bias. Further testing of Heckman selection model[33] suggests that star consensus recommendations over the post-deal period are also significantly positively related to acquirer announcement performance.

In addition, the variable *Ln(MV)* is significantly negatively related to analyst consensus recommendations. The result is driven by the subsample of non-star analysts. In other words, non-stars do not value large firms. The variable M/B is significantly positive in specification 2, indicating that post-deal star consensus recommendations are more favourable for more glamour acquirers. The variable *RUNUP* is significantly positive in all of the specifications, suggesting that analysts, including both stars and non-stars, make more favourable recommendations for acquirers with better pre-deal stock performance. The variable sigma is significantly negative related to analyst consensus recommendations. The result is driven by the subsample of non-star analysts, indicating that lower sigma acquirers get more favourable non-star consensus recommendations over the post-deal period. The variable *Past Experience* is significantly positive in all of the specifications,

[33] The results will be discussed in detail later in this section.

which suggests that both stars and non-stars value experienced acquirers. The variable *Relative Size* is significantly positive in specifications 3 and 6, implying that stars make more favourable post-deal consensus recommendations for acquirers that make acquisitions of relatively larger targets. The variables *Cash* and *Stock* are significantly negatively related to analyst consensus recommendations. The results are driven by the subsample of non-star analysts, suggesting that non-stars do not value acquirers that make all-cash deals or all-stock deals. The variable *Tender Offer* is significantly negatively related to analyst consensus recommendations. The result is driven by the subsample of non-star analysts, indicating that non-stars make unfavourable consensus recommendations for acquirers that make tender offers.

To address selection bias, the Heckman selection model is used. Table 4.8 shows the results of the Heckman selection model of post-deal [7, 182] consensus recommendations for the sample of acquirers covered by analysts (specification 1 and 4), the subsample of acquirers covered by star analysts (specification 2 and 5), and the subsample of acquirers covered by non-star analysts (specification 3 and 6). In these models, the dependent variables of selection equation and regression equation are post-deal [7, 182] recommendation coverage (analyst coverage for specifications 1 and 4; star coverage for specifications 2 and 5; non-star coverage for specifications 3 and 6) and post-deal consensus recommendations for acquirers (all analyst consensus recommendations in specifications 1 and 4; star analyst consensus recommendations in specifications 2 and 5; and non-star analyst consensus recommendations in specifications 3 and 6, respectively.

[Insert Table 4.8 here]

Selection equations in specifications 2 and 5 suggest that stars tend to cover larger firms, firms with higher leverage ratio, high sigma firms, and firms acquiring relatively larger targets over the post-deal period. In contrast, selection equations in specifications 3 and 6 suggest that non-stars are more likely to cover larger firms, firms with a higher cash flows-to-equity ratio, high sigma firms, firms acquiring relatively larger targets, but are less likely to cover firms making public acquisitions, firms making tender offers, and firms making diversifying deals over the post-deal period.

Furthermore, the *Inverse Mills* ratio in all of the specifications are significantly positive, implying that all of the OLS regressions above suffer from selection bias, and given the observable and latent variables that increase the probability of analyst coverage, are associated with more favourable post-deal consensus recommendations of both stars and non-stars.

Although the selection bias present in the OLS regressions above, the relations between acquirer performance and post-deal non-star consensus recommendations are not qualitatively changed. However, the relations between acquirer performance and post-deal star consensus recommendations become statistically significant after controlling for selection bias. More specifically, the measures of acquirer performance are significantly positive in all of the regression equations, indicating that both stars and non-stars make more favourable consensus recommendations for better-performed acquirers. In other words, both stars and non-stars respond to M&As.

In general, the relations between post-deal consensus recommendations and control variables hold, after selection bias is controlled for. However, the variable *Ln(MV)* loses the significance in the regression equations for the subsample of acquirers covered by

non-stars, and become significantly positive in the regression equations for the subsample of acquirers covered by stars. The result indicates that stars make more favourable recommendations for larger acquirers, whereas non-stars do not value large acquirers.

4.5.2.3. Deal Completion

Table 4.9 presents the results of the probit model of deal completion for the sample of acquirers covered by analysts (specification 1), the subsample of acquirers covered by star analysts (specification 2), and the subsample of acquirers covered by non-star analysts (specification 3). In these models, this chapter regresses the *Completed Deal* dummy against a vector of explanatory variables. The *Completed Deal* dummy equals one if the deal is successfully completed. The key explanatory variable is *Consensus* (consensus of all analysts in Specification 1; consensus of star analysts in specification 2; and consensus of non-star analysts in specification 3).

[Insert Table 4.9 here]

The variable *Consensus* is statistically insignificant in all of the specifications, indicating that both star and non-star consensus recommendations do not have predictive ability for deal completion. Furthermore, the variable *Ln(MV)* is significantly positive in all of the specifications, indicating that larger acquirers have a higher deal completion rate. The variable *M/B* is significantly positive in specifications 1 and 3, which suggests that more glamour acquirers are more likely to successfully complete deals. The variable *Sigma* is significantly negative in specifications 1 and 3, implying that the probability of deal completion is lower for high sigma acquirers. The variable *Public* is significantly negative in specifications 1 and 3, suggesting that public acquisitions have lower deal completion rate, compared to private and subsidiary acquisitions. The variable *Cash* is significantly

negative in all of the specifications, and the variable *Stock* is significantly in specifications 1 and 3, indicating that all-cash or all-stock deals have lower deal completion rate compared to mixed paid deals. The variable *Competing Bid* is significantly negative in all of the specifications, which suggests that biding contests lower the probability of deal completion.

In addition, the probit model with sample selection (Van de Ven and Van Praag, 1981) is applied to address selection bias. Table 4.10 presents the results of the probit model with sample selection of the deal completion for the sample of acquirers covered by analysts (specification 1), the subsample of acquirers covered by star analysts (specification 2), and the subsample of acquirers covered by non-star analysts (specification 3). In these models, the dependent variables of selection equation and regression equation are pre-deal [-182, -7] recommendation coverage (analyst coverage for specification 1; star coverage for specification 2; non-star coverage for specification 3) and *Completed Deal* dummy, respectively.

[Insert Table 4.10 here]

Since the Wald tests have p-values of 0.355, 0.445, and 0.454 in specifications 1, 2, and 3, respectively, the hypothesis that the selection equation and probit equation are independent cannot be rejected. In other words, the results of the above probit models are reliable.

Overall, pre-deal consensus recommendations are not related to the probability of deal completion. In other words, neither star consensus recommendations nor non-star consensus recommendations are an effective predictor for deal successfulness.

4.5.2.4. Star Analysts' Predictive Ability in the Year Before Voted as Stars

The results above suggest that star consensus recommendations do not have predictive ability for acquirer performance. Since stars are elected based on the last year performance, it is necessary to examine star analysts' predictive ability in the year before elections. Table 4.11 presents results of OLS regressions of the acquirer announcement performance for the sample of acquirers covered by analysts (specifications 1 and 4), the subsample of acquirers covered by star analysts (specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (specifications 3 and 6). To examine the predictive ability of stars in the year before election, star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year after the acquisition year.

[Insert Table 4.11 here]

The results show that pre-deal star consensus recommendations are not related to acquirer performance, whereas non-star consensus recommendations are significantly positively related to acquirer performance. In other words, pre-deal consensus recommendations of stars in the year before elections do not have predictive ability for acquirer performance.

The Heckman selection model is used to address potential selection bias. Table 4.12 shows results of the Heckman selection model of the acquirer announcement performance that examine star analysts' predictive ability in the year before election.

[Insert Table 4.12 here]

The *Inverse Mills* ratio are statistically significant in the regression equations for the sample of acquirers covered by analysts and the subsample of acquirers covered by

non-stars, which suggests that corresponding OLS regressions suffer from selection bias. However, selection bias does not qualitatively affect the results. The Heckman selection model also suggests that acquirers with more favourable non-star consensus recommendations gain better announcement performance. In other words, consensus recommendations of non-stars are an effective predictor for acquirer performance. In contrast, the *Inverse Mills* ratios are statistically insignificant in the regression equations for the sample of acquirers covered by stars, indicating that the above OLS regressions of acquirer performance on star consensus recommendations are reliable. In other words, the Heckman selection models confirm the results that pre-deal consensus recommendations of stars in the year before election have no predictive ability on acquirer performance.

4.5.3. Robustness Test

This chapter addresses the robustness of the results as follows.

4.5.3.1. Announcement Performance

To examine whether the results are sensitive to the measures of acquirer performance, this chapter uses different valuation models and event windows to calculate announcement abnormal returns. In addition to the market-adjusted cumulative abnormal returns (CAR) and standardized cumulative abnormal returns (SCAR), this chapter also uses the market model, the Fama-French three-factor model (Fama and French, 1993), and the Fama-French-momentum four-factor model (Fama and French, 1993; Carhart, 1997) to compute announcement abnormal returns. In addition to the [-2, 2] window, this chapter also calculate abnormal returns over the [-1, 1] and [-5, 5] windows. The results are robust to these variations.

4.5.3.2. Star Analyst Status

This chapter defines stars as analysts voted as the members of the All-America Research Team by *Institutional Investor* magazine in the year prior to the announcement year. This chapter has examined the performance of stars in the year before election. In addition, this chapter also examines the performance of stars in the year of election. The results are not sensitive to these variations.

4.5.3.3. Consensus Recommendations

This chapter measures consensus recommendations over different windows. In addition to pre-deal [-182, -7] and post-deal [7, 182] windows, this chapter also measures pre-deal consensus recommendations over the [-365, -7], [-91, -7], and [-61, -7] windows, and post-deal consensus recommendations over the [7, 61], [7, 91] and [7, 365] windows. The results are robust to these variations.

4.5.3.4. Other Issues

To control for the impact of outliers, this chapter also winsorizes all of the continuous variables at different levels, such as 1% and 99%, 3% and 97%, and 5% and 95%. In terms of sample selection, this chapter excludes financial (SIC codes 6000–6999) and utility firms (SIC codes 4900–4999). For the Heckman selection model, this chapter does not impose exclusion restrictions. In addition to a two-step estimator, this chapter also uses the maximum likelihood estimator in Heckman selection models. The results are not sensitive to the variations discussed above.

4.6. Conclusion

Using a sample of US acquisitions by acquirers with analyst coverage during 1996–2010, this chapter examines financial analyst behaviour around takeovers to investigate whether analyst recommendations can be used to predict acquirer performance, and whether analysts respond to M&A announcements. More importantly, this chapter compares and contrasts the recommendations of star and non-star analysts to investigate whether high-ranked analysts' recommendations have stronger predictive ability for acquirer performance.

This chapter finds that acquirers with more favourable pre-deal consensus recommendations outperform acquirers with less favourable pre-deal consensus recommendations, suggesting that analyst recommendations have predictive ability for acquirer performance. On the other hand, if analyst recommendations are used as the proxy of stock valuation and future business opportunities, the results also suggest that firms that are temporarily undervalued but have growth prospects are more likely to become better acquirers. However, pre-deal recommendations are not predictive of deal completion. Additionally, financial analysts adjust their recommendations after acquisition announcements. Post-deal consensus recommendations are more favourable for acquirers that gain higher announcement returns. In other words, financial analysts respond to M&As.

This chapter also compares star and non-star analysts. Compared to non-star analysts, star analysts are more likely to cover larger acquirers, glamour acquirers, acquirers with higher leverage, acquirers with lower pre-deal stock performance, acquirers with lower stock return volatility, and more experienced acquirers. Acquirers covered by star analysts also

tend to conduct larger transactions and make more public acquisitions but gain significantly lower announcement returns.

On average, non-star analysts make more optimistic recommendations for acquirers than star analysts. However, star pre-deal consensus recommendations are not significant related to acquirer performance, whereas more favourable non-star recommendations are associated with better acquirer announcement performance. In other words, although non-star analysts are more biased towards favourable recommendations, non-star analysts' recommendations are more informative to predict acquirer performance. If investors can identify this systematic bias, non-star analyst recommendations for acquirers have greater investment values around announcements. Furthermore, both star and non-star analysts respond to acquisitions by making recommendations according to acquirer performance.

Since the decisions on stock coverage and stock recommendations may be correlated, in other words, the sample of acquirers with recommendations are not randomly selected, regression results may suffer from selection bias. This chapter uses the Heckman model to address this issue. Consequently, the results are not qualitatively changed.

Overall, star recommendations have stronger predictive ability for acquirer performance than non-star recommendations, indicating that analyst rankings are a popularity contest.

Table 4.1 Summary statistics for the M&A deals

This table presents summary statistics for the sample of M&A deals by acquirers covered by analysts around announcements, and univariate comparison between deals by acquirers covered by star analysts and non-star analysts only. Panel A reports acquirer announcement performance. CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around announcements. SCAR [-2, 2] is the 5-day standardized cumulative abnormal returns around announcements. Panel B reports acquirer firm characteristics. MV is market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. Panel C reports deal characteristics. Transaction Value is the value of the deal. Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Stock dummy equals one if the deal is 100% paid by stock. Cash dummy equals one if the deal is 100% paid by cash. Mixed dummy equals one if the deal is mixed paid by both stock and cash. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Completed Deals dummy equals one if the deal is completed. All continuous variables are winsorized at the 2% and 98% levels. P-Values are shown in parentheses (the t-test and the Wilcoxon signed-rank test for the mean and median abnormal returns, respectively; the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	All			Star Coverage (S)			Only Non-Star Coverage (N)			Difference (S) – (N)			
										Mean		Median	
	Mean	Median	No.	Mean	Median	No.	Mean	Median	No.	Mean	P-Value	Median	P-Value
Panel A: Announcement Performance													
CAR [-2,2]	1.053%***	0.464%***	10169	0.573%***	0.142%***	3497	1.305%***	0.638%***	6672	-0.732%***	(0.000)	-0.496%***	(0.000)
	(0.000)	(0.000)		(0.000)	(0.001)		(0.000)	(0.000)					
SCAR [-2,2]	32.086%***	18.745%***	10169	17.366%***	6.641%***	3497	39.801%***	23.928%***	6672	-22.435%***	(0.000)	-17.287%***	(0.000)
	(0.000)	(0.000)		(0.000)	(0.004)		(0.000)	(0.000)					
Panel B: Firm Characteristics													
MV ($ mil.)	6646.352	796.811	10169	14457.385	3176.558	3497	2552.350	436.26	6672	11905.035***	(0.000)	2740.302***	(0.000)
M/B	4.741	2.819	10169	5.248	3.142	3497	4.475	2.640	6672	0.773***	(0.000)	0.503***	(0.000)
Leverage	0.313	0.285	10169	0.353	0.334	3497	0.292	0.247	6672	0.061***	(0.000)	0.087***	(0.000)
Cash Flows/Equity	0.044	0.047	10169	0.052	0.049	3497	0.039	0.045	6672	0.013***	(0.000)	0.004***	(0.000)
RUNUP	18.376%	11.204%	10169	17.180%	10.798%	3497	19.00%	11.415%	6672	-1.824%*	(0.054)	-0.617%	(0.394)
Sigma	0.031	0.026	10169	0.027	0.023	3497	0.033	0.028	6672	-0.005***	(0.000)	-0.005***	(0.000)
Past Experience	7.879	5.000	10169	11.649	8.000	3497	5.903	4.000	6672	5.746***	(0.000)	4.000***	(0.000)
Panel C: Deal Characteristics													
Transaction Value ($ mil.)	272.979	49.500	10169	514.953	130.000	3497	146.154	32.000	6672	368.800***	(0.000)	98.000***	(0.000)
Relative Size	0.167	0.064	10169	0.144	0.040	3497	0.180	0.078	6672	-0.036***	(0.000)	-0.037***	(0.000)
Public	26.856%	–	10169	34.601%	–	3497	22.797%	-	6672	11.804%***	(0.000)	–	–
Stock	23.493%	–	10169	23.563%	–	3497	23.456%	-	6672	0.107%	(0.904)	–	–
Cash	41.892%	–	10169	47.126%	–	3497	39.149%	-	6672	7.977%***	(0.000)	–	–
Mix	34.615%	–	10169	29.311%	–	3497	37.395%	-	6672	-8.084%***	(0.000)	–	–
Hostile	1.160%	–	10169	1.630%	–	3497	0.914%	-	6672	0.716%***	(0.003)	–	–
Competing Bid	1.583%	–	10169	2.259%	–	3497	1.229%	-	6672	1.030%***	(0.000)	–	–

Tender Offer	6.126%	–	10169	8.665%	–	3497	4.796%	-	6672	3.868%***	(0.000)	–	–
Diversification	36.719%	–	10169	37.489%	–	3497	36.316%	-	6672	1.173%	(0.245)	–	–
Completed Deals	91.769%	–	10169	92.279%	–	3497	91.502%	-	6672	0.777%	(0.170)	–	–

Table 4.2: Consensus recommendations for acquirers around announcements

This table presents analyst consensus recommendations, star analyst consensus recommendations, and non-star analyst consensus recommendations for acquirers around M&A announcements. Panel A reports pre-deal consensus recommendations for acquirers over the period beginning 182 and ending 7 days before the announcement. Panel B reports post-deal consensus recommendations for acquirers beginning 7 and ending 182 days after the announcement. Panel C reports the difference in consensus recommendations for acquirers between the post-deal and pre-deal periods. P-Values are shown in parentheses (the t-test for the differences in means). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

	All Consensus	**Star Consensus (S)**	**Non-Star Consensus (N)**	**Difference (S) – (N)**	
				Mean	**P-value**
Panel A: Pre-deal [-182, -7] Consensus					
Mean	3.923	3.783	3.930	-0.147***	(0.000)
No.	9179	2450	9060		
Panel B: Post-deal [7, 182] Consensus					
Mean	3.860	3.741	3.864	-0.123***	(0.000)
No.	9285	2555	9192		
Panel C: Difference (Panel B – Panel A)					
Mean	-0.063***	-0.041*	-0.065***		
P-value	(0.000)	(0.080)	(0.000)		

Table 4.3: Announcement performance for acquirers with different pre-deal consensus recommendations

This table presents announcement performance for acquirers with different consensus recommendations over the period beginning 182 and ending 7 days before the announcement. Analyst recommendations from IBES are based on a five-point scale. Codes 1, 2, 3, 4 and 5 stand for 'strong buy', 'buy', 'hold', 'underperform', and 'sell', respectively. To map a more optimistic recommendation to a larger number, this chapter reverse IBES codes, using 1, 2, 3, 4, and 5 to represent 'strong sell', 'sell', 'hold', 'buy', and 'strong buy', respectively. Correspondingly, consensus recommendations range from 1 to 5, where 1 and 5 represent the most pessimistic and the most optimistic consensus recommendations, respectively. Acquirer announcement performance is measured by CAR and SCAR. Specifically, CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around announcement, and SCAR [-2, 2] is the 5-day standardized cumulative abnormal returns around announcement. Panel A reports announcement performance for acquirers with pessimistic ($1 \leq Consensus < 2.5$), neutral ($2.5 \leq Consensus < 3.5$), and optimistic ($2.5 \leq Consensus < 3.5$) consensus recommendations. Panel A1, A2, and A3 relates to results for acquirers covered by analysts, acquirers covered by star analysts, and acquirers covered by non-star analysts, respectively. Panel B reports announcement performance for acquirers with less optimistic ($3.5 \leq Consensus < 4.5$) and more optimistic ($4.5 \leq Consensus \leq 5$) consensus recommendations. Panel B1, B2, and B3 relates to results for acquirers covered by analysts, acquirers covered by star analysts, and acquirers covered by non-star analysts, respectively. P-Values are shown in parentheses (the t-test and the Wilcoxon signed-rank test for the mean and median abnormal returns, respectively; the t-test and the Wilcoxon rank-sum test for the differences in means and medians, respectively). CARs and SCARs are winsorized at the 2% and 98% levels. Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

Panel A: Announcement Performance for Acquirers with pessimistic, neutral and optimistic consensus recommendations								
	Consensus Recommendations						Difference	
	Pessimistic (P) 1≤Consensus<2.5		Neutral (N) 2.5≤Consensus<3.5		Optimistic (O) 3.5≤Consensus≤5		(O) – (P)	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Panel A1: Acquirers with Analyst Recommendation Coverage								
CAR [-2,2]	-0.204%	-0.380%	0.755%***	0.218%***	1.069%***	0.508%***	1.272%*	0.888%**
P-Value	(0.753)	(0.372)	(0.000)	(0.001)	(0.000)	(0.000)	(0.054)	(0.042)
SCAR [-2,2]	-5.975%	-16.237%	23.288%***	10.975%***	32.391%***	20.385%***	38.367%	36.622%*
P-Value	(0.808)	(0.423)	(0.000)	(0.003)	(0.000)	(0.000)	(0.124)	(0.046)
No.	119	119	2053	2053	7007	7007		
Panel A2: Acquirers with Star Analyst Recommendation Coverage								
CAR [-2,2]	1.052%	0.337%	0.424%*	0.102%	0.509%***	0.112%*	-0.543%	-0.225%
P-Value	(0.140)	(0.263)	(0.073)	(0.237)	(0.008)	(0.069)	(0.459)	(0.512)
SCAR [-2,2]	23.322%	17.460%	17.655%*	3.936%	15.475%**	6.238%	-7.847%	-11.221%
P-Value	(0.405)	(0.287)	(0.058)	(0.213)	(0.020)	(0.101)	(0.785)	(0.579)
No.	90	90	775	775	1585	1585		
Panel A3: Acquirers with Non-Star Analyst Recommendation Coverage								
CAR [-2,2]	0.046%	-0.253%	0.808%***	0.251%***	1.075%***	0.509%***	1.029%	0.762%*
P-Value	(0.942)	(0.672)	(0.000)	(0.000)	(0.000)	(0.000)	(0.110)	(0.096)
SCAR [-2,2]	-0.483%	-11.607%	25.637%***	13.125%***	32.201%***	20.920%***	32.684%	32.527%*
P-Value	(0.984)	(0.586)	(0.000)	(0.001)	(0.000)	(0.000)	(0.181)	(0.079)
No.	123	123	2002	2002	6935	6935		

Panel B: Announcement Performance for Acquirers with less optimistic and more optimistic consensus recommendations						
	Consensus Recommendations				Difference	
	Less Optimistic (LO) 3.5≤Consensus<4.5		More Optimistic (MO) 4.5≤Consensus≤5		(MO) – (LO)	
	Mean	Median	Mean	Median	Mean	Median
Panel B1: Acquirers with Analyst Recommendation Coverage						
CAR [-2,2]	0.759%***	0.266%***	1.756%***	1.134%***	0.997%***	0.869%***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SCAR [-2,2]	23.133%***	11.367%***	52.987%***	38.928%***	29.853%***	27.561%***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
No.	4834	4834	2173	2173		
Panel B2: Acquirers with Star Analyst Recommendation Coverage						
CAR [-2,2]	0.454%*	0.103%	0.610%*	0.167%	0.156%	0.064%
P-Value	(0.057)	(0.146)	(0.057)	(0.284)	(0.695)	(0.994)
SCAR [-2,2]	14.690%*	5.720%	16.917%	6.798%	2.227%	1.079%
P-Value	(0.081)	(0.171)	(0.123)	(0.367)	(0.872)	(0.917)
No.	1026	1026	559	559		
Panel B3: Acquirers with Non-Star Analyst Recommendation Coverage						
CAR [-2,2]	0.760%***	0.266%***	1.735%***	1.071%***	0.974%***	0.806%***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SCAR [-2,2]	23.399%***	11.640%***	50.624%***	37.446%***	27.225%***	25.806%***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
No.	4693	4693	2242	2242		

Table 4.4: Post-deal consensus recommendations for acquirers with different announcement performance

This table presents post-deal consensus recommendations over the period beginning 7 ending 182 days after the announcement. Panel A reports post-deal [7, 182] consensus recommendations for acquirers with different CARs. CAR [-2, 2] is the 5-day market-adjusted cumulative abnormal returns around announcement. Acquirers are categorized into quartiles based on CARs, where group (1) and group (4) represent acquirers with lowest and highest CARs, respectively. Panel A1, A2 and A3 relate to analyst consensus, star analyst consensus, and non-star analyst consensus, respectively. Panel B reports post-deal [7, 182] consensus recommendations for acquirers with different SCARs. SCAR [-2, 2] is the 5-day standardized cumulative abnormal returns around announcement. Acquirers are categorized into four groups based on SCARs, where group (1) and group (4) represents acquirers with lowest and highest SCARs, respectively. Panel B1, B2 and B3 relate to analyst consensus, star analyst consensus, and non-star analyst consensus, respectively. P-Values are shown in parentheses (the t-test for the differences in means). Statistical significance at the 1% level, 5% level and 10% level is denoted by ***, ** and * respectively.

Panel A: Post-deal [7, 182] Consensus Recommendations for Acquirers with Different CARs						
	CAR [-2, 2]				**Difference**	
	Low----------High					
	(1)	**(2)**	**(3)**	**(4)**	**(4) – (1)**	
					Mean	**P-Value**
Panel A1: Analyst Consensus						
Consensus	3.862	3.810	3.829	3.947	0.084***	(0.000)
N	2340	2427	2351	2167		
Panel A2: Star Analyst Consensus						
Consensus	3.767	3.704	3.666	3.874	0.107**	(0.034)
N	641	726	706	482		
Panel A3: Non-Star Analyst Consensus						
Consensus	3.865	3.811	3.843	3.946	0.081***	(0.000)
N	2318	2402	2324	2148		
Panel B: Post-deal [7, 182] Recommendations for Acquirers with Different SCARs						
	SCAR [-2, 2]				**Difference**	
	Low----------High					
	(1)	**(2)**	**(3)**	**(4)**	**(4) – (1)**	
					Mean	**P-Value**
Panel B1: Analyst Consensus						
Consensus	3.821	3.857	3.874	3.890	0.069***	(0.001)
N	2440	2294	2272	2279		
Panel B2: Star Analyst Consensus						
Consensus	3.739	3.716	3.733	3.780	0.042	(0.375)
N	732	611	628	584		
Panel B3: Non-Star Analyst Consensus						
Consensus	3.825	3.860	3.884	3.892	0.066***	(0.001)
N	2417	2271	2247	2257		

Table 4.5: OLS regressions of acquirer announcement performance

This table presents results of OLS regressions of the acquirer announcement performance for the sample of acquirers covered by analysts (Specifications 1 and 4), the subsample of acquirers covered by star analysts (Specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (Specifications 3 and 6). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year before the acquisition year. In these models this chapter regresses acquirer performance (CAR [-2, 2] for Specifications 1, 2, and 3; SCAR [-2, 2] for Specifications 4, 5, and 6) against a vector of explanatory variables. The key explanatory variable is Consensus calculated as the average analyst recommendations (Consensus of all analyst in Specifications 1 and 4; Consensus of star analysts in Specifications 2 and 5; and Consensus of non-star analysts in Specifications 3 and 6). Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. All continuous variables are winsorized at the 2% and 98% levels. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Regression of CAR on Consensus			Regression of SCAR on Consensus		
	All	**Star**	**Non-Star**	**All**	**Star**	**Non-Star**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Consensus	0.0035**	-0.0004	0.0029**	0.1309***	-0.0025	0.1085**
	(0.012)	(0.832)	(0.033)	(0.006)	(0.974)	(0.018)
Ln(MV)	-0.0029***	-0.0019	-0.0030***	-0.1172***	-0.1169**	-0.1212***
	(0.000)	(0.181)	(0.000)	(0.000)	(0.014)	(0.000)
M/B	0.0001	-0.0002	0.0001	0.0072	0.0122	0.0069
	(0.610)	(0.672)	(0.637)	(0.121)	(0.157)	(0.137)
Leverage	0.0044	-0.0077	0.0050	-0.0004	-0.3187	0.0140
	(0.247)	(0.267)	(0.195)	(0.997)	(0.200)	(0.910)
Cash Flows/Equity	0.0164	0.0536**	0.0149	0.2810	1.1543*	0.2602
	(0.227)	(0.031)	(0.279)	(0.421)	(0.077)	(0.463)
RUNUP	0.0050*	0.0135**	0.0052*	0.1673**	0.3590**	0.1780**
	(0.084)	(0.018)	(0.073)	(0.016)	(0.013)	(0.010)
Sigma	0.1710	0.4035*	0.1748	-3.2061	3.6558	-3.1637
	(0.128)	(0.070)	(0.122)	(0.223)	(0.456)	(0.233)
Past Experience	0.0001	0.0000	0.0001	0.0009	0.0012	0.0012
	(0.518)	(0.998)	(0.458)	(0.795)	(0.825)	(0.726)
Relative Size	0.0136***	-0.0010	0.0129**	0.3686**	0.0353	0.3231*
	(0.006)	(0.901)	(0.010)	(0.026)	(0.914)	(0.055)
Public	-0.0232***	-0.0144***	-0.0232***	-0.8135***	-0.5223***	-0.8128***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash	0.0055***	0.0100***	0.0056***	0.2457***	0.4992***	0.2464***
	(0.005)	(0.005)	(0.004)	(0.000)	(0.000)	(0.000)
Stock	-0.0012	-0.0043	-0.0008	-0.0618	-0.1267	-0.0485
	(0.677)	(0.394)	(0.792)	(0.452)	(0.424)	(0.558)
Hostile	-0.0237***	-0.0197**	-0.0236***	-1.0589***	-0.9463**	-1.0524***
	(0.001)	(0.040)	(0.001)	(0.000)	(0.015)	(0.000)
Competing Bid	-0.0181***	-0.0231***	-0.0175**	-0.6254**	-1.1056***	-0.5789**
	(0.007)	(0.009)	(0.012)	(0.016)	(0.005)	(0.030)
Tender Offer	0.0336***	0.0163***	0.0334***	1.3403***	0.7856***	1.3394***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Diversification	-0.0007	-0.0047	-0.0006	-0.0749	-0.2407**	-0.0719
	(0.693)	(0.139)	(0.735)	(0.212)	(0.039)	(0.235)
Constant	0.0088	0.0207	0.0117	0.6165*	1.2410*	0.7369**
	(0.433)	(0.305)	(0.298)	(0.084)	(0.090)	(0.038)
N	9179	2450	9060	9179	2450	9060
R^2	0.038	0.053	0.038	0.049	0.062	0.049
Adjusted R^2	0.034	0.037	0.034	0.045	0.046	0.045

Table 4.6: Heckman selection model (two-step) of acquirer announcement performance

This table presents results of Heckman selection model of the acquirer announcement performance for the sample of acquirers covered by analysts (Specifications 1 and 4), the subsample of acquirers covered by star analysts (Specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (Specification 3 and 6). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year before the acquisition year. In these models, the dependent variables of selection equation and regression equation are pre-deal [-182, -7] recommendation coverage (analyst coverage for Specifications 1 and 4; star coverage for Specifications 2 and 5; non-star coverage for Specifications 3 and 6) and acquirer performance (CAR [-2, 2] for Specifications 1, 2, and 3; SCAR [-2, 2] for Specifications 4, 5, and 6), respectively. The key explanatory variable is Consensus calculated as the average analyst recommendations (Consensus of all analyst in Specification 1 and 4; Consensus of star analysts in Specification 2 and 5; and Consensus of non-star analysts in Specification 3 and 6). Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Past Coverage dummy is used as the variable of exclusion restriction. Past Coverage dummy equals one if the acquirer is covered by analysts (all analysts in Specification 1 and 4; star analysts in Specification 2 and 5; and non-star analysts in Specification 3 and 6) over the [-730, -182] window prior to announcement. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. All continuous variables are winsorized at the 2% and 98% levels. The P-Values are shown in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Regression of CAR on Consensus						Regression of SCAR on Consensus					
	All (1)		Star (2)		Non-Star (3)		All (4)		Star (5)		Non-Star (6)	
	Selection	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**
Consensus		0.0032**		-0.0005		0.0025*		0.1238***		0.0005		0.1001**
		(0.025)		(0.807)		(0.067)		(0.007)		(0.995)		(0.027)
Ln(MV)	0.4952***	-0.0010	0.3520***	-0.0014	0.4571***	-0.0010	0.4952***	-0.0766***	0.3520***	-0.1422**	0.4571***	-0.0755**
	(0.000)	(0.259)	(0.000)	(0.436)	(0.000)	(0.276)	(0.000)	(0.008)	(0.000)	(0.033)	(0.000)	(0.011)
M/B	0.0098***	0.0001	-0.0064**	-0.0002	0.0105***	0.0001	0.0098***	0.0071	-0.0064**	0.0129	0.0105***	0.0070
	(0.001)	(0.498)	(0.016)	(0.517)	(0.000)	(0.501)	(0.001)	(0.126)	(0.016)	(0.159)	(0.000)	(0.134)
Leverage	0.2151***	0.0050	0.3370***	-0.0073	0.1616***	0.0053	0.2151***	0.0117	0.3370***	-0.3382	0.1616***	0.0215
	(0.001)	(0.164)	(0.000)	(0.276)	(0.009)	(0.141)	(0.001)	(0.921)	(0.000)	(0.165)	(0.009)	(0.855)
Cash Flows/Equity	0.4922***	0.0203*	0.7378***	0.0545***	0.4988***	0.0191*	0.4922***	0.3640	0.7378***	1.1001	0.4988***	0.3532
	(0.001)	(0.050)	(0.000)	(0.005)	(0.001)	(0.069)	(0.001)	(0.283)	(0.000)	(0.113)	(0.001)	(0.302)
RUNUP	-0.1300***	0.0049**	-0.1695***	0.0133***	-0.1241***	0.0051**	-0.1300***	0.1658**	-0.1695***	0.3732**	-0.1241***	0.1752**
	(0.000)	(0.019)	(0.000)	(0.001)	(0.000)	(0.016)	(0.000)	(0.016)	(0.000)	(0.010)	(0.000)	(0.011)
Sigma	5.8196***	0.1705**	10.0374***	0.4090***	5.9316***	0.1772**	5.8196***	-3.2184	10.0374***	3.3322	5.9316***	-3.1102
	(0.000)	(0.030)	(0.000)	(0.006)	(0.000)	(0.025)	(0.000)	(0.209)	(0.000)	(0.535)	(0.000)	(0.227)
Past Experience	-0.0025	0.0000	-0.0090***	-0.0000	-0.0032	0.0000	-0.0025	-0.0001	-0.0090***	0.0016	-0.0032	0.0001
	(0.375)	(0.872)	(0.000)	(0.952)	(0.238)	(0.801)	(0.375)	(0.972)	(0.000)	(0.727)	(0.238)	(0.968)
Relative Size		0.0127***		-0.0010		0.0120***		0.3510***		0.0323		0.3033**
		(0.000)		(0.881)		(0.001)		(0.003)		(0.891)		(0.011)
Public		-0.0233***		-0.0144***		-0.0233***		-0.8160***		-0.5231***		-0.8152***
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
Cash		0.0055***		0.0101***		0.0056***		0.2452***		0.4947***		0.2455***
		(0.007)		(0.005)		(0.006)		(0.000)		(0.000)		(0.000)
Stock		-0.0009		-0.0043		-0.0005		-0.0553		-0.1297		-0.0417

		(0.724)		(0.341)		(0.857)		(0.495)		(0.422)		(0.610)
Hostile		-0.0235***		-0.0197*		-0.0233***		-1.0535***		-0.9473**		-1.0449***
		(0.004)		(0.081)		(0.005)		(0.000)		(0.020)		(0.000)
Competing Bid		-0.0179***		-0.0230**		-0.0173**		-0.6211***		-1.1087***		-0.5748**
		(0.010)		(0.025)		(0.015)		(0.006)		(0.003)		(0.013)
Tender Offer		0.0333***		0.0163***		0.0333***		1.3359***		0.7857***		1.3361***
		(0.000)		(0.004)		(0.000)		(0.000)		(0.000)		(0.000)
Diversification		-0.0011		-0.0046		-0.0010		-0.0835		-0.2434**		-0.0811
		(0.528)		(0.130)		(0.568)		(0.152)		(0.027)		(0.167)
Past Coverage	0.8700***		1.0098***		0.8489***		0.8700***		1.0098***		0.8489***	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
Inverse Mills ratio		0.0158***		0.0016		0.0167***		0.3335**		-0.0941		0.3732**
		(0.001)		(0.753)		(0.001)		(0.040)		(0.609)		(0.026)
Constant	-3.2314***	-0.0079	-4.6255***	0.0150	-2.9688***	-0.0061	-3.2314***	0.2636	-4.6255***	1.5739*	-2.9688***	0.3392
	(0.000)	(0.493)	(0.000)	(0.559)	(0.000)	(0.597)	(0.000)	(0.482)	(0.000)	(0.091)	(0.000)	(0.369)
N	11846	9179	11846	2450	11846	9060	11846	9179	11846	2450	11846	9060
Pseudo R^2	0.363	–	0.342	–	0.336	–	0.363	–	0.342	–	0.336	–
Adjusted R^2	–	0.025	–	0.031	–	0.025	–	0.034	–	0.040	–	0.034

Table 4.7: OLS regressions of post-deal consensus recommendations for acquirers

This table presents results of OLS regressions of post-deal [7, 182] consensus recommendations for the sample of acquirers covered by analysts (Specifications 1 and 4), the subsample of acquirers covered by star analysts (Specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (Specifications 3 and 6). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year before the acquisition year. In these models this chapter regresses post-deal consensus recommendations for acquirers (all analyst consensus recommendations in Specifications 1 and 4; star analyst consensus recommendations in Specifications 2 and 5; non-star analyst consensus recommendations in Specifications 3 and 6) against a vector of explanatory variables. The key explanatory variables are CAR [-2, 2] and SCAR [-2, 2]. Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. All continuous variables are winsorized at the 2% and 98% levels. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Regression of Consensus on CAR			Regression of Consensus on SCAR		
	All	**Star**	**Non-Star**	**All**	**Star**	**Non-Star**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
CAR [-2,2]	0.1861**	0.3355	0.1544*			
	(0.031)	(0.122)	(0.079)			
SCAR [-2,2]				0.0064**	0.0094	0.0057**
				(0.016)	(0.108)	(0.034)
ln(MV)	-0.0357***	-0.0026	-0.0352***	-0.0356***	-0.0022	-0.0350***
	(0.000)	(0.863)	(0.000)	(0.000)	(0.887)	(0.000)
M/B	-0.0000	0.0048*	0.0004	-0.0001	0.0047	0.0003
	(0.986)	(0.091)	(0.785)	(0.966)	(0.100)	(0.802)
Leverage	0.0141	-0.0684	0.0309	0.0150	-0.0658	0.0317
	(0.696)	(0.438)	(0.391)	(0.676)	(0.456)	(0.379)
Cash Flows/Equity	-0.0530	-0.0105	-0.0897	-0.0528	-0.0048	-0.0894
	(0.646)	(0.966)	(0.459)	(0.648)	(0.985)	(0.460)
RUNUP	0.3020***	0.2483***	0.2968***	0.3018***	0.2488***	0.2965***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Sigma	-1.8261**	-1.0120	-2.0033***	-1.7727**	-0.8899	-1.9572***
	(0.012)	(0.555)	(0.008)	(0.015)	(0.603)	(0.009)
Past Experience	0.0045***	0.0058***	0.0042***	0.0045***	0.0058***	0.0042***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Relative Size	0.0469	0.0390	0.0652*	0.0469	0.0383	0.0650*
	(0.152)	(0.589)	(0.052)	(0.152)	(0.596)	(0.052)
Public	0.0096	0.0420	-0.0009	0.0106	0.0429	0.0004
	(0.586)	(0.275)	(0.963)	(0.548)	(0.264)	(0.984)
Cash	-0.0505***	-0.0188	-0.0476***	-0.0510***	-0.0197	-0.0482***
	(0.003)	(0.679)	(0.006)	(0.003)	(0.663)	(0.005)
Stock	-0.0518**	-0.0599	-0.0439**	-0.0517**	-0.0603	-0.0438**
	(0.010)	(0.227)	(0.033)	(0.010)	(0.225)	(0.034)
Hostile	-0.0282	0.0984	-0.0347	-0.0259	0.1014	-0.0323
	(0.685)	(0.559)	(0.624)	(0.711)	(0.547)	(0.650)
Competing Bid	0.0128	-0.1454	0.0127	0.0138	-0.1443	0.0139
	(0.827)	(0.291)	(0.831)	(0.814)	(0.294)	(0.816)
Tender Offer	-0.1303***	-0.0649	-0.1337***	-0.1328***	-0.0668	-0.1365***
	(0.000)	(0.303)	(0.000)	(0.000)	(0.289)	(0.000)
Diversification	0.0120	0.0540	0.0104	0.0124	0.0546	0.0108
	(0.426)	(0.178)	(0.497)	(0.412)	(0.172)	(0.482)
Constant	3.9838***	3.7242***	3.9741***	3.9813***	3.7177***	3.9715***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	9285	2555	9192	9285	2555	9192
R^2	0.166	0.187	0.154	0.166	0.187	0.154
Adjusted R^2	0.162	0.174	0.150	0.162	0.174	0.150

Table 4.8: Heckman selection model (two-step) of post-deal consensus recommendations for acquirers

This table presents results of Heckman selection model of post-deal [7, 182] consensus recommendations for the sample of acquirers covered by analysts (Specifications 1 and 4), the subsample of acquirers covered by star analysts (Specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (Specifications 3 and 6). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year before the acquisition year. In these models, the dependent variables of selection equation and regression equation are post-deal [7, 182] recommendation coverage (analyst coverage for Specifications 1 and 4; star coverage for Specifications 2 and 5; non-star coverage for Specifications 3 and 6) and post-deal consensus recommendations for acquirers (all analyst consensus recommendations in Specifications 1 and 4; star analyst consensus recommendations in Specifications 2 and 5; non-star analyst consensus recommendations in Specifications 3 and 6), respectively. The key explanatory variables are CAR [-2, 2] and SCAR [-2, 2]. Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Past Coverage dummy is used as the variable of exclusion restriction. Past Coverage dummy equals one if the acquirer is covered by analysts (all analysts in Specifications 1 and 4; star analysts in Specifications 2 and 5; and non-star analysts in Specifications 3 and 6) over the [-730, -7] window prior to announcement. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. All continuous variables are winsorized at the 2% and 98% levels. The P-Values are shown in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Regression of Consensus on CAR						Regression of Consensus on SCAR					
	All (1)		Star (2)		Non-Star (3)		All (4)		Star (5)		Non-Star (6)	
	Selection	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**
CAR [-2,2]	0.3004	0.1901**	0.2284	0.3799*	0.2833	0.1600*						
	(0.108)	(0.019)	(0.275)	(0.079)	(0.123)	(0.054)						
SCAR [-2,2]							0.0027	0.0063**	0.0104*	0.0109*	0.0037	0.0058**
							(0.670)	(0.011)	(0.093)	(0.063)	(0.540)	(0.023)
Ln(MV)	0.4894***	-0.0054	0.3085***	0.0396**	0.4615***	-0.0032	0.4881***	-0.0051	0.3091***	0.0401**	0.4605***	-0.0029
	(0.000)	(0.430)	(0.000)	(0.027)	(0.000)	(0.657)	(0.000)	(0.454)	(0.000)	(0.026)	(0.000)	(0.685)
M/B	0.0019	-0.0002	-0.0020	0.0046*	0.0016	0.0002	0.0020	-0.0002	-0.0021	0.0044*	0.0017	0.0002
	(0.532)	(0.863)	(0.480)	(0.086)	(0.586)	(0.861)	(0.514)	(0.843)	(0.464)	(0.097)	(0.573)	(0.880)
Leverage	0.1145*	0.0246	0.3173***	-0.0324	0.0564	0.0359	0.1153*	0.0255	0.3188***	-0.0295	0.0572	0.0367
	(0.084)	(0.376)	(0.000)	(0.643)	(0.382)	(0.209)	(0.082)	(0.358)	(0.000)	(0.672)	(0.375)	(0.199)
Cash Flows/Equity	0.5596***	-0.0036	0.2545	0.0215	0.5617***	-0.0391	0.5645***	-0.0023	0.2555	0.0275	0.5657***	-0.0380
	(0.000)	(0.965)	(0.215)	(0.919)	(0.000)	(0.643)	(0.000)	(0.977)	(0.213)	(0.897)	(0.000)	(0.653)
RUNUP	0.0513	0.3068***	-0.0270	0.2349***	0.0312	0.2997***	0.0518	0.3066***	-0.0277	0.2354***	0.0316	0.2995***
	(0.174)	(0.000)	(0.522)	(0.000)	(0.398)	(0.000)	(0.170)	(0.000)	(0.511)	(0.000)	(0.392)	(0.000)
Sigma	2.8906**	-1.9326***	3.3504**	-0.7786	3.4321***	-2.0446***	2.9558**	-1.8783***	3.4277**	-0.6419	3.5061***	-1.9958***
	(0.032)	(0.002)	(0.029)	(0.626)	(0.010)	(0.001)	(0.029)	(0.002)	(0.026)	(0.687)	(0.008)	(0.001)
Past Experience	0.0024	0.0038***	-0.0027	0.0052***	-0.0013	0.0034***	0.0024	0.0038***	-0.0027	0.0052***	-0.0012	0.0034***
	(0.444)	(0.000)	(0.108)	(0.000)	(0.646)	(0.000)	(0.441)	(0.000)	(0.108)	(0.000)	(0.653)	(0.000)
Relative Size	0.1193**	0.0414	0.2430***	0.0699	0.0965*	0.0588**	0.1261**	0.0416	0.2426***	0.0691	0.1018*	0.0587**
	(0.044)	(0.134)	(0.000)	(0.291)	(0.094)	(0.039)	(0.033)	(0.133)	(0.000)	(0.296)	(0.078)	(0.039)
Public	-0.0975*	-0.0011	-0.0137	0.0396	-0.0952*	-0.0115	-0.1043**	-0.0003	-0.0105	0.0408	-0.1002**	-0.0104
	(0.051)	(0.954)	(0.760)	(0.315)	(0.051)	(0.547)	(0.037)	(0.988)	(0.816)	(0.301)	(0.040)	(0.586)
Cash	-0.0455	-0.0549***	0.0488	-0.0120	-0.0452	-0.0526***	-0.0441	-0.0554***	0.0474	-0.0132	-0.0440	-0.0532***

	(0.245)	(0.001)	(0.226)	(0.753)	(0.236)	(0.001)	(0.259)	(0.000)	(0.240)	(0.729)	(0.248)	(0.001)
Stock	-0.0646	-0.0502***	-0.0704	-0.0681	-0.0238	-0.0396**	-0.0635	-0.0500***	-0.0699	-0.0685	-0.0229	-0.0395**
	(0.167)	(0.009)	(0.153)	(0.155)	(0.603)	(0.046)	(0.174)	(0.010)	(0.156)	(0.152)	(0.617)	(0.047)
Hostile	-0.3368**	-0.0403	-0.0589	0.0998	-0.2638	-0.0431	-0.3410**	-0.0381	-0.0532	0.1036	-0.2668*	-0.0408
	(0.041)	(0.542)	(0.696)	(0.420)	(0.100)	(0.524)	(0.038)	(0.564)	(0.724)	(0.403)	(0.097)	(0.547)
Competing Bid	0.0766	0.0224	0.0828	-0.1457	0.0159	0.0184	0.0714	0.0233	0.0859	-0.1443	0.0116	0.0195
	(0.626)	(0.685)	(0.516)	(0.173)	(0.914)	(0.746)	(0.649)	(0.673)	(0.500)	(0.178)	(0.938)	(0.732)
Tender Offer	-0.2832***	-0.1488***	-0.0683	-0.0671	-0.2804***	-0.1543***	-0.2710***	-0.1511***	-0.0746	-0.0696	-0.2720***	-0.1569***
	(0.000)	(0.000)	(0.348)	(0.277)	(0.000)	(0.000)	(0.001)	(0.000)	(0.306)	(0.260)	(0.001)	(0.000)
Diversification	-0.0490	0.0039	-0.0175	0.0539*	-0.0567*	0.0017	-0.0490	0.0042	-0.0167	0.0546*	-0.0567*	0.0020
	(0.159)	(0.781)	(0.616)	(0.096)	(0.094)	(0.907)	(0.159)	(0.762)	(0.632)	(0.091)	(0.094)	(0.889)
Past Coverage	1.1381***		1.2660***		1.1414***		1.1383***		1.2665***		1.1416***	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
Inverse Mills ratio		0.2537***		0.1678***		0.2626***		0.2548***		0.1676***		0.2634***
		(0.000)		(0.001)		(0.000)		(0.000)		(0.001)		(0.000)
Constant	-3.1727***	3.7128***	-4.6182***	3.1301***	-3.0625***	3.6854***	-3.1673***	3.7090***	-4.6263***	3.1234***	-3.0590***	3.6817***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	11846	9285	11846	2555	11846	9192	11846	9285	11846	2555	11846	9192
Pseudo R^2	0.387	–	0.384	–	0.365	–	0.387	–	0.385	–	0.365	–
Adjusted R^2	–	0.166	–	0.178	–	0.154	–	0.167	–	0.178	–	0.154

Table 4.9: Probit model of deal completion

This table presents results of probit model of the deal completion for the sample of acquirers covered by analysts (Specification 1), the subsample of acquirers covered by star analysts (Specification 2), and the subsample of acquirers covered by non-star analysts (Specification 3). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year before the acquisition year. In these models this chapter regresses Completed Deal dummy against a vector of explanatory variables. Completed Deal dummy equals one if the deal is completed. The key explanatory variable is Consensus calculated as the average analyst recommendations (Consensus of all analysts in Specification 1; Consensus of star analysts in Specification 2; and Consensus of non-star analysts in Specification 3). Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. All continuous variables are winsorized at the 2% and 98% levels. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	All	Star	Non-Star
	(1)	(2)	(3)
Consensus	-0.0359	-0.0526	-0.0453
	(0.273)	(0.316)	(0.155)
Ln(MV)	0.0743***	0.1195***	0.0724***
	(0.000)	(0.001)	(0.000)
M/B	0.0083**	0.0044	0.0084**
	(0.021)	(0.526)	(0.020)
Leverage	0.0548	-0.1248	0.0557
	(0.518)	(0.495)	(0.514)
Cash Flows/Equity	0.2544	-0.1742	0.2782
	(0.274)	(0.698)	(0.232)
RUNUP	0.0183	0.0734	0.0192
	(0.717)	(0.545)	(0.706)
Sigma	-4.3070**	-2.5632	-4.0879**
	(0.025)	(0.472)	(0.035)
Past Experience	-0.0020	0.0033	-0.0017
	(0.612)	(0.451)	(0.657)
Relative Size	-0.0647	0.1737	-0.0940
	(0.427)	(0.311)	(0.248)
Public	-0.1419**	-0.1636	-0.1283**
	(0.015)	(0.158)	(0.029)
Cash	-0.2276***	-0.3061***	-0.2316***
	(0.000)	(0.004)	(0.000)
Stock	-0.3100***	-0.0745	-0.3215***
	(0.000)	(0.584)	(0.000)
Hostile	-1.7272***	-1.5774***	-1.7148***
	(0.000)	(0.000)	(0.000)
Competing Bid	-1.1096***	-0.9464***	-1.0972***
	(0.000)	(0.000)	(0.000)
Tender Offer	-0.0000	0.0966	-0.0086
	(1.000)	(0.555)	(0.929)
Diversification	-0.0692	-0.0035	-0.0663
	(0.136)	(0.968)	(0.157)
Constant	4.8766***	4.8157***	4.9168***
	(0.000)	(0.000)	(0.000)
N	9179	2450	9060
Pseudo R^2	0.111	0.145	0.110

Table 4.10: Probit model with sample selection of deal completion

This table presents results of probit model with sample selection of the deal completion for the sample of acquirers covered by analysts (Specification 1), the subsample of acquirers covered by star analysts (Specification 2), and the subsample of acquirers covered by non-star analysts (Specification 3). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year before the acquisition year. In these models, the dependent variables of selection equation and regression equation are pre-deal [-182, -7] recommendation coverage (analyst coverage for Specification 1; star coverage for Specification 2; non-star coverage for Specification 3) and Completed Deal dummy, respectively. Completed Deal dummy equals one if the deal is completed. The key explanatory variable is Consensus calculated as the average analyst recommendations (Consensus of all analyst in Specification 1; Consensus of star analysts in Specification 2; and Consensus of non-star analysts in Specification 3). Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Past Coverage dummy is used as the variable of exclusion restriction. Past Coverage dummy equals one if the acquirer covered by analysts (all analysts in Specification 1; star analysts in Specification 2; and non-star analysts in Specification 3) over the [-730, -182] window prior to announcement. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. All continuous variables are winsorized at the 2% and 98% levels. The P-Values are shown in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	All (1)		Star (2)		Non-Star (3)	
	Selection	**Probit**	**Selection**	**Probit**	**Selection**	**Probit**
Consensus		-0.0382		-0.0563		-0.0473
		(0.250)		(0.301)		(0.149)
Ln(MV)	0.4952***	0.0892***	0.3520***	0.1474***	0.4571***	0.0848***
	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)	(0.000)
M/B	0.0099***	0.0083**	-0.0064**	0.0033	0.0106***	0.0085**
	(0.001)	(0.028)	(0.016)	(0.663)	(0.000)	(0.025)
Leverage	0.2157***	0.0588	0.3371***	-0.0996	0.1622***	0.0573
	(0.001)	(0.488)	(0.000)	(0.584)	(0.009)	(0.502)
Cash Flows/Equity	0.4898***	0.2869	0.7376***	-0.1039	0.4976***	0.3044
	(0.001)	(0.214)	(0.000)	(0.835)	(0.001)	(0.193)
RUNUP	-0.1301***	0.0171	-0.1693***	0.0596	-0.1242***	0.0181
	(0.000)	(0.733)	(0.000)	(0.589)	(0.000)	(0.721)
Sigma	5.8020***	-4.3074**	10.0343***	-2.1213	5.9175***	-4.0725**
	(0.000)	(0.019)	(0.000)	(0.612)	(0.000)	(0.028)
Past Experience	-0.0024	-0.0022	-0.0090***	0.0029	-0.0030	-0.0019
	(0.403)	(0.358)	(0.000)	(0.518)	(0.257)	(0.429)
Relative Size		-0.0693		0.1770		-0.0977
		(0.383)		(0.300)		(0.223)
Public		-0.1425**		-0.1602		-0.1287**
		(0.011)		(0.135)		(0.023)
Cash		-0.2268***		-0.3003***		-0.2310***
		(0.000)		(0.004)		(0.000)
Stock		-0.3061***		-0.0726		-0.3185***
		(0.000)		(0.581)		(0.000)
Hostile		-1.7257***		-1.5720***		-1.7130***
		(0.000)		(0.000)		(0.000)
Competing Bid		-1.1085***		-0.9397***		-1.0964***
		(0.000)		(0.000)		(0.000)
Tender Offer		-0.0016		0.0968		-0.0094
		(0.985)		(0.515)		(0.917)
Diversification		-0.0715*		0.0008		-0.0681
		(0.094)		(0.992)		(0.113)
Past Coverage	0.8685***		1.0099***		0.8475***	
	(0.000)		(0.000)		(0.000)	
Constant	0.8497	5.1077	-4.4612***	4.9790	1.3259	5.2668
	(0.998)	(0.990)	(0.000)	(0.991)	(0.998)	(0.992)
N	11846	9179	11846	2450	11846	9060
χ^2 (ρ=0)	0.854 (p=0.355)		0.582 (p=0.445)		0.561 (p=0.454)	

Table 4.11: OLS regressions of acquirer announcement performance (Examining star analyst predictive ability in the year before elections)

This table presents results of OLS regressions of the acquirer announcement performance for the sample of acquirers covered by analysts (Specifications 1 and 4), the subsample of acquirers covered by star analysts (Specifications 2 and 5), and the subsample of acquirers covered by non-star analysts (Specifications 3 and 6). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year after the acquisition year. In these models this chapter regresses acquirer performance (CAR [-2, 2] for Specifications 1, 2, and 3; SCAR [-2, 2] for Specifications 4, 5, and 6) against a vector of explanatory variables. The key explanatory variable is Consensus calculated as the average analyst recommendations (Consensus of all analyst in Specification 1 and 4; Consensus of star analysts in Specification 2 and 5; and Consensus of non-star analysts in Specification 3 and 6). Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. All continuous variables are winsorized at the 2% and 98% levels. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. The P-Values shown in parentheses are adjusted for heteroskedasticity and acquirer clustering. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Regression of CAR on Consensus			Regression of SCAR on Consensus		
	All	**Star**	**Non-Star**	**All**	**Star**	**Non-Star**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Consensus	0.0033**	-0.0013	0.0029**	0.1454***	-0.0390	0.1186**
	(0.024)	(0.529)	(0.046)	(0.003)	(0.616)	(0.013)
Ln(MV)	-0.0029***	-0.0029**	-0.0030***	-0.1115***	-0.1355***	-0.1162***
	(0.000)	(0.046)	(0.000)	(0.000)	(0.006)	(0.000)
M/B	0.0001	-0.0002	0.0001	0.0075	0.0043	0.0075
	(0.641)	(0.545)	(0.624)	(0.113)	(0.626)	(0.117)
Leverage	0.0047	-0.0022	0.0045	-0.0170	-0.1934	-0.0270
	(0.236)	(0.760)	(0.268)	(0.894)	(0.435)	(0.834)
Cash Flows/Equity	0.0138	0.0241	0.0104	0.1669	0.3381	0.0684
	(0.348)	(0.353)	(0.479)	(0.654)	(0.646)	(0.854)
RUNUP	0.0050*	0.0148***	0.0051*	0.1506**	0.3250**	0.1604**
	(0.097)	(0.008)	(0.089)	(0.035)	(0.024)	(0.025)
Sigma	0.1590	0.1685	0.1483	-3.9376	-0.6990	-4.2508
	(0.178)	(0.470)	(0.212)	(0.153)	(0.897)	(0.124)
Past Experience	0.0001	-0.0001	0.0001	0.0001	-0.0026	0.0003
	(0.588)	(0.487)	(0.573)	(0.968)	(0.558)	(0.939)
Relative Size	0.0138***	-0.0036	0.0126**	0.3566**	-0.0893	0.2961*
	(0.006)	(0.685)	(0.014)	(0.037)	(0.783)	(0.085)
Public	-0.0235***	-0.0200***	-0.0233***	-0.8342***	-0.7350***	-0.8289***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash	0.0055***	0.0076**	0.0058***	0.2385***	0.3990***	0.2433***
	(0.007)	(0.032)	(0.005)	(0.001)	(0.002)	(0.001)
Stock	-0.0013	-0.0012	-0.0011	-0.0638	-0.0112	-0.0554
	(0.654)	(0.808)	(0.705)	(0.449)	(0.943)	(0.514)
Hostile	-0.0232***	-0.0216**	-0.0231***	-1.0465***	-1.0162**	-1.0363***
	(0.002)	(0.021)	(0.002)	(0.000)	(0.011)	(0.000)
Competing Bid	-0.0202***	-0.0201*	-0.0203***	-0.6981**	-0.8005*	-0.6922**
	(0.004)	(0.059)	(0.005)	(0.011)	(0.061)	(0.014)
Tender Offer	0.0355***	0.0165***	0.0354***	1.4406***	0.7419***	1.4472***
	(0.000)	(0.003)	(0.000)	(0.000)	(0.001)	(0.000)
Diversification	-0.0002	-0.0029	-0.0003	-0.0614	-0.1930	-0.0592
	(0.904)	(0.384)	(0.873)	(0.325)	(0.100)	(0.347)
Constant	0.0047	0.0429**	0.0084	0.5090	1.9342***	0.6699*
	(0.693)	(0.037)	(0.477)	(0.164)	(0.006)	(0.064)
N	8536	2405	8418	8536	2405	8418
R^2	0.039	0.060	0.039	0.052	0.066	0.051
Adjusted R^2	0.035	0.045	0.034	0.047	0.050	0.047

Table 4.12: Heckman selection model (two-step) of acquirer announcement performance (Examining star analyst predictive ability in the year before elections)

This table presents results of Heckman selection model of the acquirer announcement performance for the sample of acquirers covered by analysts (Specification 1 and 4), the subsample of acquirers covered by star analysts (Specification 2 and 5), and the subsample of acquirers covered by non-star analysts (Specification 3 and 6). Star analysts are defined as analysts voted as the *Institutional Investor* all-star analysts in the year after the acquisition year. In these models, the dependent variables of selection equation and regression equation are pre-deal [-182, -7] recommendation coverage (analyst coverage for Specifications 1 and 4; star coverage for Specifications 2 and 5; non-star coverage for Specifications 3 and 6) and acquirer performance (CAR [-2, 2] for Specifications 1, 2, and 3; SCAR [-2, 2] for Specifications 4, 5, and 6), respectively. The key explanatory variable is Consensus calculated as the average analyst recommendations (Consensus of all analyst in Specification 1 and 4; Consensus of star analysts in Specification 2 and 5; and Consensus of non-star analysts in Specification 3 and 6). Control variables include acquirer firm characteristics and deal characteristics. For acquirer firm characteristics, Ln(MV) is the natural logarithm of the market value of equity measured 4 weeks before the announcement. M/B is measured as market value of equity 4 weeks before the announcement divided by book value of equity at the fiscal year end before the announcement. Leverage is measured as total debt over total capital at the fiscal year end before the announcement. Cash Flows/Equity is measured as cash flows at the fiscal year end before the announcement divided by market value of equity 4 weeks before the announcement. RUNUP is measured as market-adjusted CARs over the [-365, -28] window prior to announcement. Sigma is measured as the standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to announcement. Past Experience is measured as the number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question. For deal characteristics, Relative Size is measured as the transaction value divided by the acquirer market value of equity 4 weeks before the announcement. Public dummy equals one if the target is publicly listed. Cash dummy equals one if the deal is 100% paid by cash. Stock dummy equals one if the deal is 100% paid by stock. Hostile dummy equals one if the deal is identified as hostile or unsolicited by Thomson One Banker. Competing Bid dummy equals one if the number of bidding firms is more than one. Tender Offer dummy equals one if the deal is a tender offer. Diversification dummy equals one if the acquirer and the target have different first two-digit of primary SIC code. Past Coverage dummy is used as the variable of exclusion restriction. Past Coverage dummy equals one if the acquirer is covered by analysts (all analyst in Specification 1 and 4; star analysts in Specification 2 and 5; and non-star analysts in Specification 3 and 6) over the [-730, -180] window prior to announcement. This chapter also controls for industry fixed effects and year fixed effects. For brevity, they are not reported in the table. All continuous variables are winsorized at the 2% and 98% levels. The P-Values are shown in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Regression of CAR on Consensus						Regression of SCAR on Consensus					
	All (1)		Star (2)		Non-Star (3)		All (4)		Star (5)		Non-Star (6)	
	Selection	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**	**Selection**	**Regression**
Consensus		0.0029**		-0.0011		0.0024*		0.1358***		-0.0347		0.1084**
		(0.048)		(0.580)		(0.093)		(0.005)		(0.636)		(0.021)
Ln(MV)	0.4863***	-0.0005	0.3311***	-0.0042**	0.4468***	-0.0007	0.4863***	-0.0566*	0.3311***	-0.1724***	0.4468***	-0.0594*
	(0.000)	(0.575)	(0.000)	(0.024)	(0.000)	(0.494)	(0.000)	(0.060)	(0.000)	(0.009)	(0.000)	(0.054)
M/B	0.0099***	0.0001	-0.0047*	-0.0002	0.0119***	0.0001	0.0099***	0.0075	-0.0047*	0.0053	0.0119***	0.0078
	(0.001)	(0.534)	(0.074)	(0.437)	(0.000)	(0.450)	(0.001)	(0.117)	(0.074)	(0.558)	(0.000)	(0.104)
Leverage	0.2160***	0.0054	0.3300***	-0.0032	0.1709***	0.0049	0.2160***	-0.0008	0.3300***	-0.2200	0.1709***	-0.0161
	(0.001)	(0.152)	(0.000)	(0.638)	(0.007)	(0.199)	(0.001)	(0.995)	(0.000)	(0.357)	(0.007)	(0.896)
Cash Flows/Equity	0.4954***	0.0189*	0.6824***	0.0210	0.4522***	0.0151	0.4954***	0.2868	0.6824***	0.2481	0.4522***	0.1834
	(0.002)	(0.095)	(0.001)	(0.303)	(0.003)	(0.185)	(0.002)	(0.435)	(0.001)	(0.732)	(0.003)	(0.620)
RUNUP	-0.1331***	0.0048**	-0.1570***	0.0154***	-0.1318***	0.0048**	-0.1331***	0.1463**	-0.1570***	0.3426**	-0.1318***	0.1535**
	(0.000)	(0.028)	(0.000)	(0.000)	(0.000)	(0.028)	(0.000)	(0.038)	(0.000)	(0.018)	(0.000)	(0.030)
Sigma	5.5883***	0.1582*	10.9648***	0.1503	5.7249***	0.1513*	5.5883***	-3.9577	10.9648***	-1.2256	5.7249***	-4.1789
	(0.000)	(0.056)	(0.000)	(0.351)	(0.000)	(0.069)	(0.000)	(0.139)	(0.000)	(0.830)	(0.000)	(0.120)
Past Experience	-0.0024	0.0000	-0.0054***	-0.0001	-0.0012	0.0000	-0.0024	-0.0011	-0.0054***	-0.0021	-0.0012	-0.0009
	(0.405)	(0.997)	(0.001)	(0.624)	(0.667)	(0.923)	(0.405)	(0.727)	(0.001)	(0.662)	(0.667)	(0.788)
Relative Size		0.0127***		-0.0037		0.0115***		0.3307***		-0.0904		0.2706**
		(0.001)		(0.583)		(0.003)		(0.007)		(0.703)		(0.030)
Public		-0.0237***		-0.0201***		-0.0234***		-0.8372***		-0.7361***		-0.8313***
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
Cash		0.0054**		0.0075**		0.0057***		0.2362***		0.3956***		0.2407***
		(0.011)		(0.048)		(0.008)		(0.001)		(0.003)		(0.001)
Stock		-0.0010		-0.0013		-0.0008		-0.0556		-0.0138		-0.0476

		(0.706)		(0.774)		(0.759)		(0.503)		(0.932)		(0.569)
Hostile		-0.0229***		-0.0217*		-0.0228***		-1.0407***		-1.0170**		-1.0288***
		(0.008)		(0.086)		(0.009)		(0.000)		(0.023)		(0.000)
Competing Bid		-0.0199***		-0.0202*		-0.0201***		-0.6905***		-0.8034**		-0.6869***
		(0.007)		(0.055)		(0.008)		(0.004)		(0.032)		(0.005)
Tender Offer		0.0353***		0.0166***		0.0353***		1.4351***		0.7440***		1.4433***
		(0.000)		(0.007)		(0.000)		(0.000)		(0.001)		(0.000)
Diversification		-0.0007		-0.0029		-0.0008		-0.0728		-0.1945*		-0.0702
		(0.701)		(0.362)		(0.685)		(0.228)		(0.090)		(0.248)
Past Coverage	0.8639***		1.0629***		0.8280***		0.8639***		1.0629***		0.8280***	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
Inverse Mills ratio		0.0193***		-0.0049		0.0193***		0.4530***		-0.1400		0.4657***
		(0.000)		(0.339)		(0.000)		(0.007)		(0.436)		(0.008)
Constant	-3.0545***	-0.0149	-4.1099***	0.0584**	-2.7934***	-0.0114	-3.0545***	0.0484	-4.1099***	2.3807***	-2.7934***	0.1917
	(0.000)	(0.205)	(0.000)	(0.016)	(0.000)	(0.337)	(0.000)	(0.899)	(0.000)	(0.006)	(0.000)	(0.618)
N	11037	8536	11037	2405	11037	8418	11037	8536	11037	2405	11037	8418
Pseudo R^2	0.357	–	0.340	–	0.329	–	0.357	–	0.340	–	0.329	–
Adjusted R^2	–	0.026	–	0.035	–	0.026	–	0.036	–	0.040	–	0.036

Appendix 4.1: Definitions of control variables

This table describes control variables in the regressions of this chapter. The definition for each variable is shown in the table. Panel A and B present firm characteristics and deal characteristics, respectively.

Variable	Definition
Panel A: Firm Characteristics	
Ln(MV)	The logarithm of the acquirer market value measured 4 weeks before the announcement (CRSP item PRC×SHROUT).
M/B	Market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT) divided by book value of equity at the fiscal year end before the announcement (Compustat item CEQ).
Leverage	Total debt over total capital at the fiscal year end before the announcement (Compustat item (DTLL+DLC)/(DLTT+DLC+SEQ)).
Cash Flows/Equity	Cash flows at the fiscal year end before the announcement (Compustat item IB+DP-DVP-DVC) divided by market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT).
RUNUP	Acquirer market-adjusted CARs before announcement date over the [-365, -28] window.
Sigma	The standard deviation of a firm's market-adjusted daily abnormal return over the [-365, -28] window prior to the announcement.
Past Experience	The number of M&A deals made by an acquirer over the five-year period prior to the acquisition in question
Panel B: Deal Characteristics	
Relative Size	Transaction value (from Thomson One Banker) divided by the acquirer market value of equity 4 weeks before the announcement (CRSP item PRC×SHROUT).
Public	Dummy variable equals one if the target is a publicly listed firm.
Stock	Dummy variable equals one if the deal is 100% paid by stock.
Cash	Dummy variable equals one if the deal is 100% paid by cash.
Hostile	Dummy variable equals one if the deal attitude is identified as hostile or unsolicited by Thomson One Banker.
Competing Bid	Dummy variable equals one if there are more than one bidding firms reported by Thomson One Banker.
Tender Offer	Dummy variable equals one if the deal is identified as a tender offer by Thomson One Banker.
Diversification	Dummy variable equals one if the acquirer and the target have the different first two-digit of primary SIC code.

Chapter 5 : Conclusion

5.1. Summary

This thesis focuses on the reputation-quality mechanism in the context of US mergers and acquisitions. The existing literature has examined the relationship between investment bank reputation and M&A advisory service quality, and the relationship between sell-side analyst reputation and quality of analyst stock recommendations. This thesis extends the previous research and provides further empirical evidence. Specifically, Chapter 2 investigates whether top-tier financial advisors improve their clients' performance in both the short and long term. Chapter 3 explores whether top-tier advisors can help their acquirer clients to gain a bargaining advantage, allowing them to pay lower bid premiums. More importantly, both Chapters 2 and 3 examine whether multiple top-tier financial advisors can cooperate effectively to create value for their clients, or whether they suffer from social loafing. In addition, Chapter 4 investigates whether the recommendations of star analysts have stronger predictive ability for acquirer announcement performance than those of non-star analysts, and how star and non-star analysts respond to M&As.

Prestigious investment banks charge premium advisory fees, and therefore are supposed to have superior abilities to identify synergistic targets and guarantee clients a higher proportion of synergies. However, the empirical evidence on this reputation–quality mechanism remains inconclusive. Unlike previous studies that only focus on the relationship between bank reputation and acquirer announcement returns, Chapter 2 examines the effects of top-tier advisors on acquirer performance in both the short and long term. Chapter 2 finds that bank reputation does not have any significant effects on acquirer announcement performance, but has significantly positive effects on acquirer

long-term performance. Specifically, acquirers advised by top-tier advisors do not gain significantly higher announcement returns than acquirers advised by non-top-tier advisors. In particular, acquirers advised by top-tier advisors in private acquisitions even underperform those advised by non-top-tier banks around the announcement, suggesting that the market does not value the retention of top-tier advisors in relatively simple deals in the short term. In contrast, acquirers advised by top-tier advisors outperform acquirers advised by non-top-tier advisors in the long term. This chapter argues that if the synergy identified and secured by top-tier advisors does exist, such potential synergy needs time to be materialized, and therefore the positive effects of top-tier advisors should be shown in the long term. The results suggest that prestigious banks have superior skills to improve their clients' acquisition performance. In addition, the effects of bank reputation differ across sub-samples of acquirers with different firm characteristics. Specifically, the positive effects of top-tier advisors on acquirer long-term performance is stronger for acquirers with smaller firm size and a lower cash flow-to-equity ratio. Large acquirers and cash-rich acquirers are more likely to suffer from overconfidence. The results suggest that although prestigious banks can provide a high-quality M&A advisory service, the positive effects of bank reputation could be offset by acquirer overconfidence. In addition, the number of top-tier advisors retained is positively related to acquirer long-term performance, whereas retaining more non-top-tier advisors can lead to acquirers underperforming. This direct comparison highlights the superior skills of top-tier advisors. More importantly, acquirers advised by multiple top-tier advisors outperform acquirers advised by a single top-tier advisor in the long term, suggesting that the collective work of top-tier advisors can lead to superior performance.

Chapter 3 further examines the effects of top-tier advisors on bid premiums. Specifically, this chapter investigates whether top-tier advisors can help their acquirer clients gain

bargaining advantage, and therefore pay lower premiums. Consequently, this chapter finds that acquirers advised by top-tier advisors pay significantly lower bid premiums than acquirers advised by non-top-tier advisors, suggesting that top-tier advisors have superior skill to improve their clients' bargaining power. In addition, acquirers advised by multiple top-tier advisors pay significantly lower bid premiums than acquirers advised by single top-tier advisor, whereas retaining multiple non-top-tier advisors was not found to lower bid premiums. These results are consistent with Chapter 2, confirming that having multiple top-tier advisors does not lead to social loafing. Instead, they can cooperate effectively to improve their acquirer clients' takeover performance and bargaining power.

Although acquirers using top-tier advisors pay lower bid premiums, prestigious banks charge premium advisory fees. There arises a question whether the benefits of a reduction of bid premium outweigh the cost of high advisory fees. Therefore, Chapter 3 defines cost reduction as the difference between cost savings in bid premiums and cost increases in advisory fees, and finds that the retention of top-tier advisors leads to cost reduction. Specifically, acquirers advised by top-tier advisors have lower costs than acquirers advised by non-top-tier advisors. Acquirers advised by multiple top-tier advisors are also found to have lower costs than acquirers advised by a single top-tier advisor. These results address the concern of overpayment in advisory fees to prestigious banks.

Additionally, since top-tier advisors have superior skills, they should be able to help their clients complete deals in a shorter time. However, this chapter suggests that acquirers advised by top-tier advisors do not negotiate deals in a shorter period of time than those advised by non-top-tier banks. In other words, top-tier advisors do not rush to complete deals; instead, they work diligently to provide a better service than non-top-tier advisors within the same period of time.

Chapters 2 and 3 also examine in-house deals and find that experienced firms, glamour firms and small firms are more likely to make in-house deals. However, acquirers without an advisory service do not outperform acquirers advised by banks, and pay higher bid premiums. These results suggest that in-house expertise cannot improve acquirer performance or bargaining power.

In addition to Chapters 2 and 3, which focus on investment banking divisions, Chapter 4 further analyses banks' securities research divisions. Specifically, Chapter 4 investigates whether sell-side financial analysts' stock recommendations over the pre-acquisition period can be used to predict acquirer announcement performance, and how analysts respond to takeovers. More importantly, to examine whether analysts with a better reputation make more valuable recommendations than those without, this chapter compares star analysts' recommendations and those of non-star analysts. As a consequence, Chapter 4 finds that acquirers with more favourable pre-deal consensus recommendations gain higher abnormal returns around takeover announcement, suggesting that analyst recommendations are a strong predictor of acquirer performance. If analyst stock recommendations effectively reflect firm valuation, this suggests that relatively undervalued acquirers with future growth opportunities tend to outperform relatively overvalued acquirers. Nonetheless, there is no evidence that analyst recommendations are predictive of deal completion. In addition, financial analysts respond to takeovers, updating recommendations based on acquirer performance. Specifically, analysts issue more favourable stock recommendations for better-performing acquirers over the post-announcement periods.

Further empirical tests suggest that the predictive ability of recommendations for acquirer performance differ between star analysts and non-star analysts. Both star and non-star

analysts respond to M&As; however, there is no significant relationship between star pre-deal recommendations and acquirer announcement performance, while acquirers with more favourable non-star consensus recommendations gain higher announcement returns. These results suggest that non-star recommendations have stronger predictive ability for acquirer announcement performance than those of star analysts. In other words, non-star analysts' recommendations have greater investment value than those of star analysts, indicating that analyst rankings do not effectively reflect analyst skills.

Overall, this thesis examines the reputation-quality mechanism across the two divisions of investment banks – investment banking and securities research, and suggests that bank rankings are consistent with advisory skills, while analyst rankings are a popularity contest.

5.2. Implications

This thesis has implications for both research and practice. To begin with, this paper sheds new light on the mixed results found in the literature on the M&A financial advisor reputation–quality mechanism. Previous studies have mainly examined the effects of advisory service on acquirer performance in the short term. However, this thesis emphasises that merger synergies recognised and guaranteed by advisors should materialise in the long term, and therefore investigates acquirer short- and long-term performance together. As a consequence, this study highlights the novel evidence that the retention of top-tier financial advisors improves acquirer performance in the long term rather than in the short term.

In addition, few studies have investigated the effects of advisor reputation on bid

premiums. This thesis suggests that top-tier advisors can improve their acquirer clients' bargaining power to pay lower bid premiums, and secure a greater share of potential synergies.

More importantly, to the best of the author's knowledge, no previous paper has distinguished the effects of a firm having multiple top-tier advisors from the effects of having a single top-tier advisor. This research suggests that multiple top-tier advisors do not suffer from social loafing, since they care about their reputational capital. Instead, top-tier advisors can cooperate effectively to improve their acquirer clients' performance and bargaining power.

For practitioners, this thesis suggests that prestigious banks deserve premium advisory fees. The benefits of retaining top-tier advisors outweigh the disadvantages. This thesis supports the effectiveness of market share-based league tables. Investment bank rankings are also found to be reliable in reflecting advisory skills, and can be used as an appropriate reference for acquirers to make decisions on the retention of financial advisors.

This thesis further analyses the securities research divisions of investment banks. Unlike studies that examine whether analysts forecast M&As, this chapter investigates whether analyst recommendations can be used to predict acquirer performance. Since changes in recommendations rather than recommendations themselves drive stock price drift, this chapter distinguishes between the effects of acquirer announcement and those of analyst revisions by examining stock recommendations. Whether analysts forecast acquisitions or not, this thesis finds that pre-deal stock recommendations are predictive of acquirer announcement performance.

More importantly, this thesis adds new evidence regarding the reputation–quality mechanism for sell-side analysts. Non-star analyst recommendations have stronger predictive ability for acquirer performance than star analyst recommendations. The fact that star analysts underperform is consistent with the nature of such popularity contests.

For practitioners, it should be noted that non-star analysts' recommendations have greater investment value to predict acquirer announcement performance than those of star analysts, although the recommendation revisions of star analysts are more influential regarding movements in stock price.

5.3. Limitations and Future Research

There are some limitations to this study that can be addressed in future work. To begin with, this thesis analyses US M&A activity and it would be valuable to examine whether the results are robust for different country samples. For example, China's market is very different from the US market in terms of regulations, culture, investor sentiment and so forth, which may lead to interesting findings. Furthermore, it would be useful to consider the effects of structure break on acquirers' long-term performance. More specifically, future research should distinguish advisors' effects from other factors during the post-merger period, such as CEO changes or employee turnover. Finally, in addition to abnormal stock returns, acquirer long-term benefits can be measured by operating performance, such as return on equity and sales growth.

In addition, there are several natural extensions of this thesis that the author will pursue in future. The existing literature focuses on the relationship between investment bank reputation and takeover performance. It is possible, however, that local investment banks

can provide a better M&A advisory service as local banks are more familiar with local market and companies, and therefore can more effectively identify synergistic targets. Therefore, the author intends to investigate whether local banks or prestigious banks create more value for their clients by analysing a comprehensive dataset of European domestic and cross-border M&As. In addition, most studies use market share-based rankings as a proxy for investment bank reputation but bank reputation can also be measured by investor attention. In line with Da, Engelberg and Gao (2011), the author will use the Google Search Volume Index (SVI) as a proxy of investor attention, and explore whether banks with more attention are found to improve their clients' performance and bargaining power more than those with less attention. Furthermore, the decision to retain investment banks can be affected by CEO characteristics. For example, overconfident CEOs overestimate their ability to achieve synergies, and are more likely to conduct value-destroying deals (Roll, 1986; Doukas and Petmezas, 2007; Malmendier and Tate, 2008). It is reasonable to predict that overconfident CEOs are more likely to retain prestigious banks to complete their intended deals. Therefore, the author plans to investigate whether the effects of investment banks alter across firms with different CEO characteristics, such as overconfidence, age, education, and so forth.

References

Aktas, Nihat, Eric de Bodt, and Richard Roll, 2010, Negotiations under the threat of an auction, *Journal of Financial Economics* 98, 241-255.

Allen, Franklin, 1984, Reputation and product quality, *The RAND Journal of Economics* 15, 311-327.

Allen, Linda, Julapa Jagtiani, Stavros Peristiani, and Anthony Saunders, 2004, The role of bank advisors in mergers and acquisitions, *Journal of Money, Credit and Banking* 36, 197-224.

Angrist, Joshua D., and Alan B. Krueger, 2001, Instrumental variables and the search for identification: From supply and demand to natural experiments, *Journal of Economic Perspectives* 15, 69-85.

Bao, Jack, and Alex Edmans, 2011, Do investment banks matter for m&a returns?, *Review of Financial Studies* 24, 2286-2315.

Barber, Brad M., and John D. Lyon, 1997, Detecting long-run abnormal stock returns: The empirical power and specification of test statistics, *Journal of Financial Economics* 43, 341-372.

Bargeron, Leonce L., 2012, Do shareholder tender agreements inform or expropriate shareholders?, *Journal of Corporate Finance* 18, 373-388.

Bargeron, Leonce L., Frederik P. Schlingemann, René M. Stulz, and Chad J. Zutter, 2008, Why do private acquirers pay so little compared to public acquirers?, *Journal of Financial Economics* 89, 375-390.

Bates, Thomas W., and Michael L. Lemmon, 2003, Breaking up is hard to do? An analysis of termination fee provisions and merger outcomes, *Journal of Financial Economics* 69, 469-504.

Becher, David A., Jonathan B. Cohn, and Jennifer L. Juergens, 2014, Do stock analysts influence merger completion? An examination of post-merger announcement recommendations, working paper.

Berger, Philip G., and Eli Ofek, 1995, Diversification's effect on firm value, *Journal of Financial Economics* 37, 39-65.

Betton, Sandra, and B. Espen Eckbo, 2000, Toeholds, bid jumps, and expected payoffs in takeovers, *The Review of Financial Studies* 13, 841-882.

Board, Simon, and Moritz Meyer-ter-Vehn, 2013, Reputation for quality, *Econometrica* 81, 2381-2462.

Bodnaruk, Andriy, Massimo Massa, and Andrei Simonov, 2009, Investment banks as insiders and the market for corporate control, *Review of Financial Studies* 22, 4989-5026.

Boni, Leslie, and Kent L. Womack, 2006, Analysts, industries, and price momentum, *Journal of Financial and Quantitative Analysis* 41, 85-109.

Boone, Audra L., and J. Harold Mulherin, 2008, Do auctions induce a winner's curse? New evidence from the corporate takeover market, *Journal of Financial Economics* 89, 1-19.

Bouwman, Christa H. S., Kathleen Fuller, and Amrita S. Nain, 2009, Market valuation and acquisition quality: Empirical evidence, *Review of Financial Studies* 22, 633-679.

Bowers, Helen M., and Robert E. Miller, 1990, Choice of investment banker and shareholders' wealth of firms involved in acquisitions, *Financial Management* 19, 34-44.

Bradley, Daniel J., Angela G. Morgan, and Jack G. Wolf, 2007, Analyst behavior surrounding tender offer announcements, *Journal of Financial Research* 30, 1-19.

Bris, Arturo, 2002, Toeholds, takeover premium, and the probability of being acquired, *Journal of Corporate Finance* 8, 227-253.

Cameron, Adrian Colin, and P. K. Trivedi, 2010. *Microeconometrics using stata* (Stata Press, College Station, Tex.).

Carhart, Mark M., 1997, On persistence in mutual fund performance, *The Journal of Finance* 52, 57-82.

Caruana, Albert, and Michael T. Ewing, 2010, How corporate reputation, quality, and value influence online loyalty, *Journal of Business Research* 63, 1103-1110.

Chahine, Salim, and Ahmad Ismail, 2009, Premium, merger fees and the choice of investment banks: A simultaneous analysis, *The Quarterly Review of Economics and Finance* 49, 159-177.

Chang, Saeyoung, 1998, Takeovers of privately held targets, methods of payment, and bidder returns, *The Journal of Finance* 53, 773-784.

Clarke, Jonathan, Ajay Khorana, Ajay Patel, and P. Raghavendra Rau, 2007, The impact of all-star analyst job changes on their coverage choices and investment banking deal flow, *Journal of Financial Economics* 84, 713-737.

Comment, Robert, and G. William Schwert, 1995, Poison or placebo? Evidence on the deterrence and wealth effects of modern antitakeover measures, *Journal of Financial Economics* 39, 3-43.

Conn, Robert L., Andy Cosh, Paul M. Guest, and Alan Hughes, 2005, The impact on uk acquirers of domestic, cross-border, public and private acquisitions, *Journal of Business Finance & Accounting* 32, 815-870.

Cosh, Andy, Paul M. Guest, and Alan Hughes, 2006, Board share-ownership and takeover performance, Journal of Business Finance & Accounting 33, 459-510.

Cotter, James F., Anil Shivdasani, and Marc Zenner, 1997, Do independent directors enhance target shareholder wealth during tender offers?, *Journal of Financial Economics* 43, 195-218.

da Silva Rosa, Raymond, Philip Lee, Michael Skott, and Terry Walter, 2004, Competition in the market for takeover advisers, *Australian Journal of Management* 29, 61-92.

Da, Zhi, Joseph Engelberg, and Pengjie Gao, 2011, In search of attention, *The Journal of Finance* 66, 1461-1499.

Dana Jr, James D., and Yuk-Fai Fong, 2011, Product quality, reputation, and market structure*, *International Economic Review* 52, 1059-1076.

Datta, Sudip, Mai Iskandar-Datta, and Kartik Raman, 2001, Executive compensation and corporate acquisition decisions, *The Journal of Finance* 56, 2299-2336.

Dawar, Niraj, and Philip Parker, 1994, Marketing universals: Consumers' use of brand name, price, physical appearance, and retailer reputation as signals of product quality, *Journal of Marketing* 58, 81-95.

De, Sankar, Mark Fedenia, and Alexander J. Triantis, 1996, Effects of competition on bidder returns, *Journal of Corporate Finance* 2, 261-282.

Desai, Hemang, Bing Liang, and Ajai K. Singh, 2000, Do all-stars shine? Evaluation of analyst recommendations, *Financial Analysts Journal* 56, 20-29.

Dong, Ming, David Hirshleifer, Scott Richardson, and Siew Hong Teoh, 2006, Does investor misvaluation drive the takeover market?, *The Journal of Finance* 61, 725-762.

Doukas, John A., and Dimitris Petmezas, 2007, Acquisitions, overconfident managers and self-attribution bias, *European Financial Management* 13, 531-577.

Duchin, Ran, and Breno Schmidt, 2013, Riding the merger wave: Uncertainty, reduced monitoring, and bad acquisitions, *Journal of Financial Economics* 107, 69-88.

Eckbo, B. Espen, 2009, Bidding strategies and takeover premiums: A review, *Journal of Corporate Finance* 15, 149-178.

Emery, Douglas R., and Xi Li, 2009, Are the wall street analyst rankings popularity contests?, *Journal of Financial and Quantitative Analysis* 44, 411-437.

Fama, Eugene F., and Kenneth R. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3-56.

Fang, Lily Hua, 2005, Investment bank reputation and the price and quality of underwriting services, *The Journal of Finance* 60, 2729-2761.

Fang, Lily, and Ayako Yasuda, 2009, The effectiveness of reputation as a disciplinary mechanism in sell-side research, *Review of Financial Studies* 22, 3735-3777.

Fang, LilyH, and Ayako Yasuda, 2014, Are stars' opinions worth more? The relation between analyst reputation and recommendation values, *Journal of Financial Services Research* 46, 235-269.

Fich, Eliezer M., Jie Cai, and Anh L. Tran, 2011, Stock option grants to target ceos during private merger negotiations, *Journal of Financial Economics* 101, 413-430.

Fuller, Kathleen, Jeffry Netter, and Mike Stegemoller, 2002, What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions, *The Journal of Finance* 57, 1763-1793.

Gleason, Cristi A., and Charles M. C. Lee, 2003, Analyst forecast revisions and market price discovery, *The Accounting Review* 78, 193-225.

Golubov, Andrey, Dimitris Petmezas, and Nickolaos G. Travlos, 2012, When it pays to pay your investment banker: New evidence on the role of financial advisors in M&As, *The Journal of Finance* 67, 271-311.

Gosset, William S. , 1908, The probable error of a mean, *Biometrika* 6, 1-25.

Harford, Jarrad, 1999, Corporate cash reserves and acquisitions, *The Journal of Finance* 54, 1969-1997.

Haushalter, David, and Michelle Lowry, 2011, When do banks listen to their analysts? Evidence from mergers and acquisitions, *Review of Financial Studies* 24, 321-357.

Hayward, Mathew L. A., and Donald C. Hambrick, 1997, Explaining the premiums paid for large acquisitions: Evidence of ceo hubris, *Administrative Science Quarterly* 42, 103-127.

Heckman, James J., 1976, The common structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such models, in *Annals of economic and social measurement, volume 5, number 4* (NBER).

Heckman, James J., 1978, Dummy endogenous variables in a simultaneous equation system, *Econometrica* 46, 931-959.

Heckman, James J., 1979, Sample selection bias as a specification error, *Econometrica* 47, 153-161.

Hirshleifer, David, and I. P. L. Png, 1989, Facilitation of competing bids and the price of a takover target, *The Review of Financial Studies* 2, 587-606.

Hong, Harrison, and Jeffrey D. Kubik, 2003, Analyzing the analysts: Career concerns and biased earnings forecasts, *The Journal of Finance* 58, 313-351.

Hunter, William C., and Julapa Jagtiani, 2003, An analysis of advisor choice, fees, and effort in mergers and acquisitions, *Review of Financial Economics* 12, 65-81.

Ismail, Ahmad, 2008, Which acquirers gain more, single or multiple? Recent evidence from the USA market, *Global Finance Journal* 19, 72-84.

Ismail, Ahmad, 2010, Are good financial advisors really good? The performance of investment banks in the m&a market, *Review of Quantitative Finance and Accounting* 35, 411-429.

Ivković, Zoran, and Narasimhan Jegadeesh, 2004, The timing and value of forecast and recommendation revisions, *Journal of Financial Economics* 73, 433-463.

Jackson, Jeffrey M., and Kipling D. Williams, 1985, Social loafing on difficult tasks: Working collectively can improve performance, *Journal of Personality and Social Psychology* 49, 937-942.

Jegadeesh, Narasimhan, and Sheridan Titman, 1993, Returns to buying winners and selling losers: Implications for stock market efficiency, *The Journal of Finance* 48, 65-91.

Jennings, RH, and MA Mazzeo, 1993, Competing bids, target management resistance, and the structure of takeover bids, *Review of Financial Studies* 6, 883-909.

Jensen, Michael C., 1986, Agency costs of free cash flow, corporate finance, and takeovers, *The American Economic Review* 76, 323-329.

Jin, Ginger Zhe, and Andrew Kato, 2006, Price, quality, and reputation: Evidence from an online field experiment, *The RAND Journal of Economics* 37, 983-1005.

Johnson, Norman J., 1978, Modified t tests and confidence intervals for asymmetrical populations, *Journal of the American Statistical Association* 73, 536-544.

Kale, Jayant R., Omesh Kini, and Harley E. Ryan, Jr., 2003, Financial advisors and shareholder wealth gains in corporate takeovers, *Journal of Financial and Quantitative Analysis* 38, 475-501.

Karau, Steven J., and Kipling D. Williams, 1993, Social loafing: A meta-analytic review and theoretical integration, *Journal of Personality and Social Psychology* 65, 681-706.

Kisgen, Darren J., Jun "Qj" Qian, and Weihong Song, 2009, Are fairness opinions fair? The case of mergers and acquisitions, *Journal of Financial Economics* 91, 179-207.

Klein, Benjamin, and Keith B. Leffler, 1981, The role of market forces in assuring contractual performance, *Journal of Political Economy* 89, 615-641.

Kolasinski, Adam C., and S. P. Kothari, 2008, Investment banking and analyst objectivity: Evidence from analysts affiliated with mergers and acquisitions advisors, *Journal of Financial and Quantitative Analysis* 43, 817-842.

Landon, Stuart, and Constance E. Smith, 1998, Quality expectations, reputation, and price, *Southern Economic Journal* 64, 628-647.

Lang, Larry H. P., and René M. Stulz, 1994, Tobin's q, corporate diversification, and firm performance, *Journal of Political Economy* 102, 1248-1280.

Lang, Larry H. P., René M Stulz, and Ralph A. Walkling, 1989, Managerial performance, tobin's q, and the gains from successful tender offers, *Journal of Financial Economics* 24, 137-154.

Leone, Andrew, and Joanna Shuang Wu, 2007, What does it take to become a superstar? Evidence from institutional investor rankings of financial analysts, working paper.

Loh, Roger K., and René M. Stulz, 2011, When are analyst recommendation changes influential?, *Review of Financial Studies* 24, 593-627.

Loughran, Tim, and Anand M. Vijh, 1997, Do long-term shareholders benefit from corporate acquisitions?, *The Journal of Finance* 52, 1765-1790.

Lyon, John D., Brad M. Barber, and Chih-Ling Tsai, 1999, Improved methods for tests of long-run abnormal stock returns, *The Journal of Finance* 54, 165-201.

Maksimovic, Vojislav, and Sheridan Titman, 1991, Financial policy and reputation for product quality, *Review of Financial Studies* 4, 175-200.

Malmendier, Ulrike, and Geoffrey Tate, 2008, Who makes acquisitions? Ceo overconfidence and the market's reaction, *Journal of Financial Economics* 89, 20-43.

Maloney, Michael T., Robert E. McCormick, and Mark L. Mitchell, 1993, Managerial decision making and capital structure, *The Journal of Business* 66, 189-217.

Marks, Kenneth H. , Robert T. Slee, Christian W. Blees, and Michael R. Nall, 2012. *Middle market m & a: Handbook for investment banking and business consulting* (John Wiley & Sons, Inc., Hoboken, New Jersey).

McLaughlin, Robyn M., 1990, Investment-banking contracts in tender offers: An empirical analysis, *Journal of Financial Economics* 28, 209-232.

McLaughlin, Robyn M., 1992, Does the form of compensation matter?: Investment banker fee contracts in tender offers, *Journal of Financial Economics* 32, 223-260.

Michaely, R, and KL Womack, 1999, Conflict of interest and the credibility of underwriter analyst recommendations, *Review of Financial Studies* 12, 653-686.

Michel, Allen, Israel Shaked, and You-Tay Lee, 1991, An evaluation of investment banker acquisition advice: The shareholders' perspective, *Financial Management* 20, 40-49.

Mikhail, Michael B., Beverly R. Walther, and Richard H. Willis, 2004, Do security analysts exhibit persistent differences in stock picking ability?, *Journal of Financial Economics* 74, 67-91.

Moeller, Sara B., Frederik P. Schlingemann, and René M. Stulz, 2004, Firm size and the gains from acquisitions, *Journal of Financial Economics* 73, 201-228.

Morck, Randall, Andrei Shleifer, and Robert W. Vishny, 1990, Do managerial objectives drive bad acquisitions?, *The Journal of Finance* 45, 31-48.

Nelson, Phillip, 1970, Information and consumer behavior, *Journal of Political Economy* 78, 311-329.

Officer, Micah S., 2003, Termination fees in mergers and acquisitions, *Journal of Financial Economics* 69, 431-467.

Rau, P. Raghavendra 2000, Investment bank market share, contingent fee payments, and the performance of acquiring firms, *Journal of Financial Economics* 56, 293-324.

Rau, P. Raghavendra, and Theo Vermaelen, 1998, Glamour, value and the post-acquisition performance of acquiring firms, *Journal of Financial Economics* 49, 223-253.

Rhodes-Kropf, Matthew, and S. Viswanathan, 2004, Market valuation and merger waves, *The Journal of Finance* 59, 2685-2718.

Rogerson, William P., 1983, Reputation and product quality, *The Bell Journal of Economics* 14, 508-516.

Roll, Richard, 1986, The hubris hypothesis of corporate takeovers, *The Journal of Business* 59, 197-216.

Rosen, Richard J. , 2006, Merger momentum and investor sentiment: The stock market reaction to merger announcements, *The Journal of Business* 79, 987-1017.

Schiereck, Dirk, Christof Sigl-Grüb, and Jan Unverhau, 2009, Investment bank reputation and shareholder wealth effects in mergers and acquisitions, *Research in International Business and Finance* 23, 257-273.

Schwert, G. William, 1996, Markup pricing in mergers and acquisitions, *Journal of Financial Economics* 41, 153-192.

Schwert, G. William, 2000, Hostility in takeovers: In the eyes of the beholder?, *The Journal of Finance* 55, 2599-2640.

Servaes, Henri, 1991, Tobin's q and the gains from takeovers, *The Journal of Finance* 46, 409-419.

Servaes, Henri, and Marc Zenner, 1996, The role of investment banks in acquisitions, *The Review of Financial Studies* 9, 787-815.

Shahrur, Husayn, and Anand Venkateswaran, 2009, Industry prospects and acquirer returns in diversifying takeovers, *Journal of Financial Research* 32, 23-51.

Shapiro, Carl, 1982, Consumer information, product quality, and seller reputation, *The Bell Journal of Economics* 13, 20-35.

Shapiro, Carl, 1983, Premiums for high quality products as returns to reputations, *The Quarterly Journal of Economics* 98, 659-679.

Shleifer, Andrei, and Robert W. Vishny, 2003, Stock market driven acquisitions, *Journal of Financial Economics* 70, 295-311.

Sibilkov, Valeriy, Miroslava Straska, and H. Gregory Waller, 2013, Do firms use m&a business to pay for analyst coverage?, *Financial Review* 48, 725-751.

Smith, Richard L., and Joo-Hyun Kim, 1994, The combined effects of free cash flow and financial slack on bidder and target stock returns, *The Journal of Business* 67, 281-310.

Song, Weihong, Jie Wei, and Lei Zhou, 2013, The value of "boutique" financial advisors in mergers and acquisitions, *Journal of Corporate Finance* 20, 94-114.

Stickel, Scott E., 1990, Predicting individual analyst earnings forecasts, *Journal of Accounting Research* 28, 409-417.

Stickel, Scott E., 1992, Reputation and performance among security analysts, *The Journal of Finance* 47, 1811-1836.

Stickel, Scott E., 1995, The anatomy of the performance of buy and sell recommendations, *Financial Analysts Journal* 51, 25-39.

Stock, James, and Motohiro Yogo, 2005, Testing for weak instruments in linear iv regression, in W. K. Andrews Donald, ed.: *Identification and inference for econometric models* (Cambridge University Press, New York).

Sudarsanam, Sudi, 2010. *Creating value from mergers and acquisitions : The challenges* (Financial Times Prentice Hall, Harlow).

Sudarsanam, Sudi, and Ashraf A. Mahate, 2003, Glamour acquirers, method of payment and post-acquisition performance: The uk evidence, *Journal of Business Finance & Accounting* 30, 299-342.

Tehranian, Hassan, Mengxing Zhao, and Julie L. Zhu, 2014, Can analysts analyze mergers?, *Management Science* 60, 959-979.

Van de Ven, Wynand P. M. M., and Bernard M. S. Van Praag, 1981, The demand for deductibles in private health insurance: A probit model with sample selection, *Journal of Econometrics* 17, 229-252.

Varaiya, Nikhil P., and Kenneth R. Ferris, 1987, Overpaying in corporate takeovers: The winner's curse, *Financial Analysts Journal* 43, 64-70.

Villalonga, Belén, 2004, Does diversification cause the "diversification discount"?, *Financial Management* 33, 5-27.

Walkling, Ralph A., and Robert O. Edmister, 1985, Determinants of tender offer premiums, *Financial Analysts Journal* 41, 27-37.

Walter, Terry S., Alfred Yawson, and Charles P. W. Yeung, 2008, The role of investment banks in m&a transactions: Fees and services, *Pacific-Basin Finance Journal* 16, 341-369.

Womack, Kent L., 1996, Do brokerage analysts' recommendations have investment value?, *The Journal of Finance* 51, 137-167.

Wu, Joanna Shuang, and Amy Y. Zang, 2009, What determine financial analysts' career outcomes during mergers?, *Journal of Accounting and Economics* 47, 59-86.

Yung, Chris, Gönül Çolak, and Wang Wei, 2008, Cycles in the ipo market, *Journal of Financial Economics* 89, 192-208.